

Tapani Heikinheimo's study has introduced and examined intensity as a relational phenomenon and as constituting a factor in interaction between teacher and student. The purpose has been to rethink the practice of instrumental and vocal pedagogy, to better understand such multi-voiced musical and pedagogical interactions and to enhance musicianship.

Intensity of Interaction offers an overview of the dynamic character of the musical and pedagogical dialogue. It aims to encompass both instrumental lesson activity as a whole, and to reveal detailed elements of the teacher-student work.

This study facilitates analysis, questioning and discussion on contents and communication within instrumental music lessons.

Intensity of Interaction:

- offers grounds for understanding the nature of teacher-student problem solving
- is related to musical and pedagogical anticipation
- is related to managing tensions and inner contradictions within the process of teaching and learning in instrumental music lessons
- as a means of understanding, facilitates musical development



Tapani Heikinheimo

Intensity of Interaction
in Instrumental Music Lessons

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Studio musica 40
Sibelius Academy

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**Intensity of Interaction in
Instrumental Music lessons**

**STUDIA MUSICA 40
SIBELIUS ACADEMY**



Sibelius Academy
Music Education Department

Studia Musica 40

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cover: Root X (2006), acrylic on wood

Cover by Juan Antonio Muro

Design by Juho Helttunen

Kajaanin Kirjapaino Oy, Kajaani, Finland

ISBN 978-952-5531-71-8

ISSN 0788-3757

”I often take radically different elements and when
I paint I try to control their opposing forces and
bring about a dialogue between them.”
Juan Antonio Muro (2007-2008)

ABSTRACT

Tapani Heikinheimo. 2009. Intensity of Interaction in Instrumental Music Lessons. Sibelius Academy. Music Education Department. Doctoral Dissertation. 342 pages.

Previous research on one-to-one instrumental music lessons in higher education has shown asymmetrical relations between teachers and students and an emphasis on expression and technique in both implicit and explicit strategies of teaching and learning. In order to rethink the practice of instrumental and vocal pedagogy, to better understand such multi-voiced musical and pedagogical interactions and to enhance musicianship, this study introduced and examined intensity as a relational phenomenon and as constituting a factor in interaction between teacher and student. Intensity of Interaction offers an overview of the dynamic character of the musical and pedagogical dialogue. It aims to encompass both instrumental lesson activity as a whole, and to reveal detailed elements of the teacher-student work. In order to theoretically frame and conceptualize the instrumental music lesson as a teaching and learning activity, the present study draws on pragmatist philosophy and cultural-historical activity theory. The following twofold question guided the study:

How does Intensity of Interaction constitute musical and pedagogical meaning construction in instrumental or vocal teaching and learning and to which features of verbal and musical communication is Intensity of Interaction connected?

This study gathered data during a period of 3 years, through interactive processes and events in 22 lessons, using observations, video and audio recordings, field notes, intensity ratings, and stimulated recall interviews. The analysis viewed the data from two parallel perspectives on the lesson interaction. The first perspective considered meaning construction in the lesson activity. The other perspective entailed interpretation of the intensity ratings, that is, the perceived meaningfulness of joint musical engagement. The analysis combined these two empirical sources of information in the framework of Activity Theory.

The study and the analysis of the data consisted of the following phases: (1) formulation and testing of methods for analysis of Intensity of Interaction based on the intensity ratings and the Method of Voices from the field of Activity Theory, (2) determination, through application of this theory and method, of ways that music teaching and learning strategies arise through internal contradictions within various forms of a) musical play, b) narrative play, and c) knowledge inquiry, (3) development of a description of the theoretical construct Intensity of Interaction as a key component of the teacher/student dialogue in music lessons.

As an outcome, the increased awareness regarding meaning construction and diversity of problem solving in music lessons has implications for both instrumental pedagogy and future research. Firstly, the results showed how Intensity of Interaction is related to teaching and learning strategies. Secondly, Intensity of Interaction highlights qualitative elements in teacher-student work, which create musical and personal growth and development. Thirdly, the findings of this study challenged the paradigm of efficiency, in which efficiency of teaching is related to high teacher intensity and inefficiency related to low teacher intensity in instrumental instruction. Fourthly, Intensity of Interaction is comprised of the continuity of tension between sense making and awareness of musical reality, sense making and conventional meaning, and musical-pedagogical concepts versus musical-pedagogical reality.

Articulation of the contradictions facilitates change as an outcome of relations in which the two polarities are not exclusive but are brought into accord through a dialogical process. Consequently, Intensity of Interaction opens up prospects of development in lesson content and structure. In all, this study highlights the sensitive nature of the teacher-student interactions and the pragmatic value of Intensity of Interaction in educating musicians and in developing the teacher-student work. This suggests the usefulness of Intensity of Interaction as a tool for self-observation and teacher education, elaborating more reflective teaching and learning contexts within instrumental pedagogy.

Keywords: intensity of interaction, musical meaning, intensity rating, dialogue, activity theory, teaching strategies, learning strategies, musical experience.

Abstrakti

Tapani Heikinheimo. 2009.

Vuorovaikutuksen intensiteetti soitto- ja laulutunneilla.

Sibelius-Akatemia. Musiikkikasvatuksen osasto.

Väitöskirja. 342 sivua.

Väitöskirjani tarkastelee soiton ja laulun opettamista ja oppimista opettajan ja oppilaan yhteisenä toimintana. Tähän liittyy musiikillisen toiminnan ja soittotunnin vuorovaikutuksen välinen suhde, jonka kautta keskityn tutkimaan musiikillis-pedagogisen dialogin dynaamista luonnetta. Intensiteetti tutkimukseni kohteena ilmentää opettajan ja oppilaan välisen vuorovaikutuksen dynaamista vaihtelua ja mm. musiikillisen ilmaisun ja soitto- tai laulutekniikan korostumista soittotunneilla. Tätä moniäänistä kokonaisuutta olen pyrkinyt hahmottamaan vuorovaikutuksen intensiteetin käsitteen avulla. Teoreettisen viitekehyksen työssäni muodostavat pragmatismi ja toiminnan teoria. Tutkimukseni pyrkii vastaamaan seuraavaan kysymykseen:

Miten vuorovaikutuksen intensiteetti ilmentää ja on olennainen osa musiikillis-pedagogista ongelmanratkaisua musiikkipedagogiikassa soitto- ja laulutunneilla ja mikä yhteys vuorovaikutuksen intensiteetillä on soittotunnin tiedonvälityksen sanallisiin ja musiikillisiin piirteisiin?

Tutkimusaineistona on 22 kuvanauhoitettua ja litteroitua soitto- ja laulutuntia. Lisäksi aineisto sisältää intensiteettiarvioinnit, stimulated recall -haastattelut ja niihin liittyvät äänitallenteet ja muistiinpanot. Analyysi tarkasteli aineistoa tutkimuksessa kehitellyistä toisiinsa kietoutuvista näkökulmista: aluksi tulkitsin musiikillista ja pedagogista merkityksen muodostusta, johon liittyi opettajien ja oppilaitten tulkinta soittotunnilla kokemastaan intensiteetistä. Seuraavassa vaiheessa yhdistin intensiteettiarvioinnin ja toiminnan teoriaan perustuvan merkityksen muodostuksen analyysin.

Aineiston analyysissä oli seuraavat vaiheet: (1) intensiteettiarvioinnin ja toiminnan teorian piiriin kuuluvan äänianalyysin soveltaminen ja kokeilu; 2) niiden opetus- ja oppimisstrategioita ilmentävien toimintatapojen määrittely, jotka liittyvät a) soittamiseen, b) juonelliseen oppimiseen, ja c) tiedonhankinnan sisäisiin jännitteisiin; sekä (3) vuorovaikutuksen intensiteetin teoreettisen käsitteen kehittäminen keskeiseksi osatekijäksi opettaja/oppilas dialogissa ja sen tutkimisessa.

Tutkimukseni valottaa merkityksen muodostusta ja ongelmanratkaisun moninaisuutta soittotunnilla neljästä näkökulmasta. Ensiksi intensiteetti on yhteydessä käytettyihin opetus- ja oppimisstrategioihin. Toiseksi vuorovaikutuksen intensiteetin käsitteen käyttäminen korostaa ja arvostaa opettajien ja oppilaiden työn laadullisia piirteitä, jotka synnyttävät musiikillista osaamista, soittimen hallintaa ja persoonallista kasvua. Kolmanneksi tutkimukseni kyseenalaistaa tehokkuuden paradigman, jossa tehokkuus on suhteessa korkeaan opettajan intensiteettiin ja tehottomuus suhteessa matalaan opettajan intensiteettiin. Neljänneksi vuorovaikutuksen intensiteetti sisältää jatkuvan jännitteen, joka ilmenee toiminnassa mielekkyyden ja musiikillisen todellisuuden tiedostamisen välillä, mielekkyyden ja totunnaisten merkitysten välillä sekä musiikillis-pedagogisten käsitteiden ja musiikillis-pedagogisen todellisuuden välillä. Nämä vastakkaisuudet eivät sulje toisiaan pois, vaan jännitteiden ja ristiriitojen artikuloinnin kautta tapahtuvassa muusikkouden kehittämisessä molemmat ovat mukana dialogisessa prosessissa.

Kaiken kaikkiaan vuorovaikutuksen intensiteetin kautta tutkimuksessani korostuu opettajan ja oppilaan musiikillisen ja pedagogisen yhteistyön herkkyys. Näin ollen vuorovaikutuksen intensiteetillä on käytännöllistä arvoa opettajien ja oppilaiden työn kehittämisessä. Tähän viittaa vuorovaikutuksen intensiteetin käyttö soitonopettajan koulutuksessa, oman työn havainnoinnissa ja sekä keskusteleavamman viitekehyksen luomisessa instrumenttipedagogiikkaan.

Avainsanoja: vuorovaikutuksen intensiteetti, musiikillinen merkitys, intensiteettiarviointi, toiminnan teoria, opetusstrategia, oppimisstrategia, musiikillinen kokemus

Acknowledgments

My profound thanks to three counselors and mentors with whom I have had the great luxury of working: professor Heidi Westerlund, doctor Ritva Engeström, and professor David Hebert. They have repeatedly and tirelessly checked my manuscript at the various states of its growth. Moreover, this process of exploration and writing, escorted by their abundant comments, corrections and guidance, offered me an experience of a stimulating and multi-voiced research group.

I would also like to denote my appreciation to the previewers of this dissertation, professor Anne Edwards University of Oxford and professor Karin Johansson Malmö Academy of Music University of Lund, for their perceptive comments and constructive suggestion that truly helped in finalizing the document.

I would like to express my gratitude to readers of the work, who have offered valuable thoughts and comments during this process (e.g. doctors Päivi Arjas, Liisamaija Hautsalo). Frequent contacts with a research groups in the Centre of Activity Theory and Developmental Work at University of Helsinki (e.g. Riitta Konkola, Pirjo Lambert, Marianne Teräs, and Terttu Tuomi-Grön), as well as with the doctoral research seminar in music education at the Sibelius Academy (e.g. Anna Kuoppamäki, Hanna Nikkanen, Sari Muhonen, Minna Muukkonen, Aleksi Ojala, Timo Pihkanen, Inga Rikandi) were crucial for my thinking, interpretations and proceeding with this study.

Thanks also to professors Kai Karma and Rebekah Brown for their effort at an early stage of this study. Special thanks to Tuula Kivistö at the Sibelius Academy for all her help in the final process.

In addition I would like to thank the teachers and students, who participated in the research process offering their personality, musical and instrumental competence without hesitation for the purposes of this study. Moreover, the experiences and discussions with my colleagues and students have added up fruitfulness and support for this study.

Warm thanks and love to my family (Silja, Janne, Siljamari, and Ulriikka) and my parents including my mother in law, who patiently have supported me in this work, which must have seemed an unknown terrain of thought and an endless process.

I dedicate this thesis to my wife, Silja, who has shown wonderful understanding to my time-consuming pursuit.

Espoo, October 2009
Tapani Heikinheimo

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Preface

Increased understanding of higher education music programs and their potential within society contributes to changing professional practices for musicians. Therefore, research on instrumental education provides a powerful resource base for both teachers and students, as well as for music academies and conservatoires.

My interest in focusing on the instrumental music lesson activity in this study is based on my work as a cellist and as a teacher of cello and pedagogy.¹ I agree with violinist Steven Clapp, for many years dean of the Juilliard School, whose opinion is that a person who is studying a musical instrument has to be a passionate musician (Rink 2008). Such passion originates genuinely, in my experience, through and within music. Music is therefore the just and obvious source for energizing the practice of instrumental teaching and learning. However, the reality of everyday work in instrumental music lesson contexts, with its combination of passionate musicians, different musical and pedagogical methods and targets, varying mental and physical volition and resistance to learning, creates an unusually complex educational process.

This raises the question of whether it is possible to simplify the complexity of teaching and learning within instrumental lessons, while maintaining the integrity of the interactive nature of what is examined. If it is possible to encapsulate the work of instrumental teachers and students, what would serve best as the basis of the description? After all, such description seems timely. The changing resources and challenges in the music educational community call for development of suitable concepts and tools in managing the possible and sometimes inevitable change in the work of many musicians, teachers, and students.

So far, research on instrumental music education as a whole has exposed several prospects for further studies. The focus of such studies, though, has mostly been on the teacher, the teaching, and effective instruction. In this literature, efficiency is often related to promoting change for better quality in musical performance and thereafter music instruction is

¹ Tapani Heikinheimo is presently a faculty member of the music department of Metropolia University of Applied Sciences in Helsinki.

considered as directly related to achieving higher standards in professional life as a musician, and success in career. However, if instrumental lessons also aim for other goals like musical, personal or social growth, what then does efficiency in musical education mean? On the other hand, as an outcome, passionate musician-teachers do not necessarily produce passionate musicians simply by energetic presentations. How do they transfer passionate musicianship in instrumental lessons? Is genuine devotion to music transferable at all? This brings up the question of interaction: What kind of interaction does successful musical learning then presume?

Therefore, this study aims to dig into the roots of this musical and pedagogical interaction process, to find and propose tools and concepts for interpretation of music lesson activity, and use those tools in thorough and detailed description of the lesson interaction. For such description, this study demonstrates application of the construct Intensity of Interaction in instrumental music lessons.

To analyze the practice of musical and pedagogical interaction, the current study develops further the Method of Voices, and adapts it in the context of instrumental music lesson. The method integrates situational features of dialogue with the cultural-historical process of meaning construction. Analyses of meaning construction are based on the theoretical notion of activity as a system that emerges and changes in time and place through internal contradictions. These principles of Activity Theory, applied in this study, also contextualize the instrumental lesson interaction into a social, cultural and historical practice.

Chapter 1

Introduction: Twofold beliefs within instrumental teaching and learning

To illustrate the topic, the introduction presents some common perceptions often encountered in instrumental music lessons. The proposed expressions involve those aspects of learning that the teacher and student provide each other, the space in which to evolve their musicianship. My experience in musical learning, in instrumental studies, and thereafter in my work as a performing musician, a cello teacher, and as an instructor of new teachers will also be exposed in the following four pairs of beliefs or perceptions. Consequently, these characterizations aim to illuminate a path for approaching questions of dynamics within lesson interaction.

(1a) The more experience of music, musical performing, teaching and learning an instrumental teacher gains, the more there seems to be things to learn in music, about instrumental technique and human beings.

(1b) The more the teachers let themselves be open in front of their students the more the students learn.

In other words, attaining knowledge and competence as a teacher does not presume stationary completeness. Quite to the contrary, a competent teacher can afford openness. How, and why, can these intertwined statements of experience and openness be true in musical learning? How intense are the emotions evoked by the presented expectations within the statements? For the sake of the student's learning the teacher's twofold position needs to be in balance: the teacher's ability in solving musical and instrument technical problems must resonate with his or her openness to the process, which includes the risk of fallibility in front of others. This balance involves a readiness to unveil emotions, physical feelings, experiences, or musical ideas. The mental attitude, for its part, underlines the characteristics of trust (Nerland & Hanken 2002). In contrast, a typical optimal extreme for a teacher would be to sustain a perfect façade: "sort of play amazingly", and try to make students to do the same (see also, Tuovila 2003; Rostvall & West 2001). In such cases the students' autonomy and self-responsibility as learners could easily be overtaken, and in some cases jeopardized,

by the teacher's desire to impart the knowledge and experience (Gaunt 2006). On the one hand, the balance between these musical and pedagogical options underlines the necessity to maintain the teacher-student relationship on a professional basis (Kuusela 2002). On the other hand, openness in the interaction also involves intense emotions of both parties.

Accordingly, the twofold statements for the students are as follows:

(2a) The better the students prepare and practice for the lesson the more there is to learn.

(2b) The more they let themselves be open in front of their teachers and peers the more the students can learn.

Again the statements presume a good balance between the students' ability to solve musical and instrumental problems and their openness to the process (Gaunt 2006; Tuovila 2003). The first statement, concerning a student's effort, necessitates the idea of the student's openness as ability for learning. The involvement in learning, however, draws significantly on the intertwined intensity of the feelings evoked by the presented expectations.

From the perspective of this study, these seemingly self-contradictory pairs of statements do not question the competences of teachers and students as musicians. Nor do they express doubtful opinions of skills, knowledge, talent or personality. The quality, amount or the character of personal abilities or skills are not directly the focus of the present research. Moreover, this study is not trying to define the complicated concept of musician or teacher competences. Definitions of such competences are inevitably formed in relation to pedagogical and musical policies expressed in the national or local curriculum. Accordingly, the pedagogical goals of music have to be in line with favorable teacher/student competences which naturally lead to priority decisions when describing those competences. In order to reach a different standpoint, this study circumvents examination of atomistic behaviors, particular skills, or assessments of personality.

Rather, the focus of this study is to understand the pedagogical and musical interaction in instrumental lessons. Specifically, this study highlights the intensity of the teacher-student experience in the teaching and learning of music-making. Music is, however, a risky and disclosing activity; the lesson uncovers who and what we are, as well as how well we have prepared for the situation (Eisenberg 1990). Therefore, the perceptions (1a) and (1b), (2a) and (2b) aim to illustrate the relationship between exposed expectations and the emotions they evoke in the students. Consequently, this study proposes that these attributes of human

behavior in musical engagement and learning construct a situational balance of intensity; a balance that seems to vary.

Variations in the balance of expectations and the corresponding feelings are presumably projections of personality, talent, and past experiences in the lesson, setting of the teacher and student. The emphasis on intensity in personal and musical engagement of human interaction in an instrumental lesson, however, leads to tension between individual and social perceptions.

(3a) The more we play and search for musical expression together the more we learn individually.

(3b) The more we interact with music individually the more we can share.

Individual goals, as this study assumes based on cultural-historical Activity Theory, are in relation to a collective object. Such an object is a shared interpretation and conception of the musical idea or assignment under development, which again regulates the scope of learning actions. The musical idea is invested step-by-step by personal sense and cultural meanings. The individual actions are determined by the personal references such as genes, musicality, talent, or personality. However, the nature of their cultivation, as a starting point for this study, is cultural and collective. Moreover, the musical involvement of both the student and the teacher, to which we open ourselves, is potentially an intensified experience (Dewey, 1934); an experience, in which we are both fully present, sharing the aesthetic qualities of music and the situation as a whole as well. In daily speech this could be called an “extremely pleasant and emotion-charged” experience, which is similar to “tune in” to the music and feel “an absolute torrent of notes” (Sacks 2007, 7, 11). This kind of musical interaction is the focus of this study.

Generally, the balance is between tensions and releases, both in music and human experience. For example, Vygotsky (1971) argues that a work of art always contains an intimate conflict between its content and form, and that the artist achieves his effect by means of the form, which destroys the content. In art, some elements are in mutual contradiction and provoke affects of contrasting nature; other elements for example rhythm, may be the cathartic resolution of the first ones. Vygotsky (1971) argues that such an approach is supported by studies which replace the old-fashioned teaching of the harmony of all the

elements of a work of art and contrast it with the principle of the struggle and antinomy of certain elements. Dewey describes this tension as an aesthetic experience:

The raised dramatic elements seek balance, release and at least a momentary solution. Passing from disturbance to harmony provides man's most intense experience. An aesthetic experience involves a drama in which action, feeling, and meaning are one. Art celebrates these moments with peculiar intensity. (Dewey 1934, 15)

Pedagogically, the crucial point is how music making becomes meaningful through shared sense making. Musical meanings are generally speaking rules for using and interpreting musical sounds. The pragmatist view, according to Westerlund (2002, 41-44), points out that musical sounds have “personal meaning”, since each individual adds something unique to the process. The musical process is also “shared and cultural”, because the musical meanings are public. “Music makes sense publicly.” The cultural and social context of active music making therefore becomes crucial in musical meaning construction (e.g. DeNora 2003; Custodero 2005). The pragmatist search for meaningfulness in musical meaning construction may be put in statements by Robert Schenk:

(4a) The better the quality, the more we enjoy it.

(4b) The more we enjoy it, the better the quality.

These intertwined statements in Schenk's (1989) article “Above all, learning an instrument must be fun!” express one important aspect of what meaningfulness in musical learning is all about. In parallel, the tension between quality work and emotional state of mind deals with Intensity of Interaction in the instrumental music lesson. Intentionally, instrumental teachers believe, according to Mills and Smith (2003, 7) that it is important “to try to lay the foundations for good technique and habits, while trying to keep lessons fun and interesting. Pupils should enjoy playing but expect to work hard”.

Achieving musical and educational quality with enjoyment, according to Schenk (1989), seems to require good balance between different goals in musical educational work. Quality may mean different kinds, forms, and ways of expressing and educating music (Swanwick 1999; Bowman 2002; Heikinheimo 2005). Generally speaking, musical expression with quality refers here to worthwhile achievements, which possess aesthetic significance in seeking order, beauty or their contrasts in music. In addition, from the point of view of music

education, quality means deepening musical experiences and knowledge with music's social meaningfulness to students (Schenk 2000). Moreover, quality with enjoyment, according to Cheng and Durant (2007), seems to produce energy. However, energy is presumably consumed and lost in most forced cultivation processes (see e.g. Custodero 2002b). Thus with enjoyment, the work particularly in instrumental music lessons, becomes a meaningful and rewarding experience (Schenk 2000).

Briefly, the purpose of this introduction has been to uncover, through four pairs of twofold beliefs, the role of balance in the intensity emerging from expectations and emotions within lesson interaction. The aforementioned statements combined (1) teachers' musical experience and knowledge with openness, (2) student preparation and initiative with openness, (3) individual contribution to ensemble expression, and of ensemble expression to individual learning, and (4) quality work with enjoyment. The tension within each pair of sentences attempted to demonstrate the twofold position the instrumental teachers and students may either implicitly or explicitly face during a lesson.

These perspectives, however, face the reality of values, attitudes, and everyday practices of the teachers and students, who carry on the culturally and historically evolved musical and pedagogical tradition. The rather long tradition of cultivation of sound production, musical expression and technical skills with prevailing pedagogical methods of one-to-one tuition, in particular, often creates a field for teacher authority (e.g. Rostvall and West 2001; Tuovila 2003; Gaunt 2006). When instrumental teachers care for the ownership of the musical quality, artistic empowerment and musical growth of the student (e.g. Custodero 2002b; Tuovila 2003; Hargreaves, Marshall, & North 2003), the teachers and students simply have to cope with openness, shared musicianship and other democratic means of communication. In other words, the interaction in instrumental music lessons between persons with passion for musical expression has the potential for being an intensified learning zone, however, with multi-layered tensions.

These tensions of a music lesson emerge sometimes purposely and sometimes unconsciously, in favor of an educational goal or as an obstacle for learning or communication. Consequently, this study is for one part a search for and elaboration of means of identifying, analyzing, and unveiling the elements, the variety of tendencies and tensions within teacher-student work in instrumental lessons. At the same time, the focus is the lesson

dialogue in detail and as a whole. Therefore, these approaches outline examining Intensity of Interaction from two aspects. Firstly, Intensity of Interaction demonstrates the teaching and learning process of an instrumental or vocal music lesson. Secondly, Intensity of Interaction refers to certain kinds of musical and pedagogical communication in the instrumental lesson context.

These viewpoints concerning Intensity of Interaction concretize the purpose of this study. By *teaching and learning process* this study refers to an ongoing continuum, with series of changes taking place in a definite manner. The manner in which the teacher and students work in instrumental lessons is dialogic. Communication is an exchange of ideas or opinions on a particular issue. In instrumental lessons, these issues are musical or instrument-specific conventions, with the object of reaching not only an amicable agreement or settlement but also accepting contradictory aspects. While examination of Intensity of Interaction guides the overall process of this study, the following chapter presents detailed issues and questions regarding the topic in focus.

1.1 The structure of the study

Chapter 2 conceptualizes the instrumental music lesson activity and thereafter specifies the research questions. The definitions of intensity in musical interaction with reference to previous studies begin the second chapter. The last part of the second chapter deals with the teacher, student, and music-centered views with the socio-cultural framework of the lesson interaction. These aspects offer background and starting points for the focus, dynamics and character of musical teaching and learning, of the current study.

Chapter 3 introduces the theoretical framework and methods of the research; the chapter discusses a connection between the pragmatist philosophy and the Activity Theory. They are both central for the design of this study, analyzing tools and interpretation of the findings. Chapters 2 and 3 provide the grounds for the research methods, which Chapter 4 then elaborates upon and specifies further. Principles and musical adaptation of the method of voices constructs this chapter.

Chapter 5 introduces and evaluates the methods and procedures used in the data collection and the analysis. The descriptions of empirical data, the lessons, the work of the

teachers and students that I have recorded, are in Chapter 6. As first part of the results, this chapter reports the perceptions of the teachers and students concerning the lesson interaction.

As second and third parts of the results, Chapters 7 and 8 provide concrete demonstrations of the analysis and discussion by giving examples from different lessons. As a conclusion of the empirical analysis, Chapter 9 demonstrates and summarizes features of Intensity of Interaction in lesson description. Finally, Chapter 10 offers conclusions and discusses the implications of the study.

Chapter 2

Conceptualizing Intensity in instrumental music lessons²

In order to conceptualize Intensity of Interaction this study focuses on two intertwined aspects of instrumental music lessons. One focuses on the teaching and learning *process*. For examining such processes the starting point of the current research holds that the instrumental music lesson or any musical engagements, such as a concert, bear the potential for an intensified experience. Musical experiences, the process of expressing musically, and particularly the instrumental teaching and learning resemble Dewey's ideas of artistic experiences. He states that

all interactions that effect stability and order in the whirling flux of change are rhythms. There is ebb and flow, systole and diastole: ordered change. Contrast of lack and fullness, of struggle and achievement, of adjustment after consummated irregularity, form the drama in which action, feeling, and meaning are one. They express power that is intense because measured through overcoming resistance. (Dewey 1934, 15)

The other aspect focuses on *interaction* in instrumental music lessons. This study approaches interaction, and particularly the intensity within it, from a dialogical perspective. According to Vygotsky (1986, 18-20), dialogue is “language and thinking simultaneously” and “construction of meanings by using previous meanings” (see also, R.Engeström 1999b).

The first part of this chapter offers general remarks on previous studies dealing with instrumental teaching and learning and with the notion intensity. Descriptions and use of the term intensity point out the frequent and seemingly self evident use of it in everyday language and especially in terms of efficiency. The second part of the chapter deals with musical interaction as a personal relation to music through teacher, student, and music-centered views

² Consistent with previous studies (e.g. Gaunt 2006), “instrumental” lessons or teaching and learning is used in this text to refer to instruction on either a musical instrument or voice, unless mentioned otherwise.

within social and cultural contexts. These ideas based on available literature and studies make the way to consider the interaction of the lesson as a joint activity. Hence, interaction as a socially, culturally and historically constructed activity of the instrumental lesson is the topic of the last part of this chapter. Finally, the presented research questions encapsulate, articulate and direct the exploration of the musical teaching and learning process and interaction of instrumental lessons.

2.1 Instrumental teaching and learning in previous studies

The topics of previous research projects demonstrate both the exhausting variety and the prevalent interests within instrumental teaching and learning. One major approach seems to be explaining efficiency through student achievement. Another approach is to find out what kind of teaching and learning expert, renowned or experienced teachers prefer. One attempt to encapsulate criteria for music teaching is Duke's (1999) comprehensive list of 86 articles published in North-America³. Duke organized the research articles into five categories according to their contents. Common to most of the research is a specific measure of instructional variables that are under the control of a teacher during the process of instruction. Furthermore, in his search for what is sometimes called "best practice", Swanwick (2008) introduced criteria that aim to identify the "good enough" teacher's contribution to students' musical development. (1) Care for music as discourse, (2) care for the music of students united with the promotion of musical fluency, (3) to understand the teaching context. These fundamental principles, according to Swanwick (2008), may to some extent be observable and revealed in the activities of teachers and students. These are recognisable virtues, even though their manifestation may not be predicted or take the form of specific behavioural objectives. They are all desired outcomes in music education: "Lights flash on", as Swanwick puts it, when these qualities appear.

Musical expression is however not a self-evident emphasis in instrumental teaching and learning contexts. Empirical studies have suggested that instrumental teaching focuses on technique rather than on expression (e.g. Persson 1994; Rostvall & West 2001; Tait 1992;). Furthermore, many textbooks for instrumental music teaching do not cover expressive aspects

³ Journal of Research in Music Education, the Bulletin of the Council for Research in Music Education, and the Journal of Music Therapy, Canadian Journal of Research in Music Education.

at all (Rostvall and West, 2001). Various researchers, e.g. Rostvall and West (2001), Karlsson and Juslin (2008), and Hultberg (2008) have demonstrated the tension between the focus on expressive and technical, implicit and explicit strategies of teaching and learning within instrumental lessons. Such tensions within instrumental music lessons are the focus of exploring the construct Intensity of Interaction. Through examining Intensity of Interaction this study aims to demonstrate the educational engagement within instrumental teaching and learning and to promote understanding for it. Such overarching understanding of teacher–student work follows two lines of inquiry in this study: one analyzing the teacher-student musical and pedagogical meaning construction and the other focusing on intensity of their interaction.

In examining efficiency and student achievement in instrumental music education it has been quite natural for most of the research to focus mainly on teacher behaviour. In contrast, this study holds as a starting point that the lesson interaction of the teacher and student within an institute is a collaborative work. Even though many studies on instrumental learning focus on teacher behaviour, the context of the examinations has usually been the teacher-student interaction. Teacher dominance in such instrumental lessons, according to most studies, seems evident, expected, and actually quite natural. For example, Duke and Simmons (2006) reported that

the teacher is clearly in control of the pace of the lesson, and that the teachers permit students to make interpretive choices in the performance of repertoire, but only among a limited range of options that are circumscribed by the teacher; students are permitted no choices regarding technique. (Duke and Simmons 2006, 14)

This study maintains that the responsibility of learning is shared. Passing musical ideas or technical solutions on to the student is not the only way of learning. Teaching and learning by both the student's initiative, pondering, emotions and other actions along with the teacher's actions construct the interest of this study. Similarly, Harald Jørgensen (2000) emphasizes the responsibility of students and institutions for the development of independent, responsible musicians and learners.

The closely related interests in previous studies fall roughly under the following topics: Time use and student attentiveness (Yarbrough & Price 1981; Kostka 1984; Witt 1986); Value of one-to-one teaching (Alexander & Dorrow 1983; Bloom 1985; Sloboda & Howe

1991; Persson 1996); Individual tuition and group lesson (Seipp & Usher 1976; Jackson 1980; Cheng & Durrant 2007); Proactive versus reactive teaching (Duke & Madsen 1991); The conceptualization of instrumental teaching (Hallam 1998; Gaunt 2006); The nature of relationships between teacher, student and parental figures (Creech & Hallam 2003); teachers' beliefs and effective instrumental teaching in schools and higher education (Kuusela 2002; Mills & Smith 2003; Gaunt 2006; Cheng & Durrant 2007); aesthetics in instrumental teaching (Louhivuori 1998); Practising (Jørgensen 1997; Lehmann 1997; Hallam 1997; Jørgensen 2002; Nielsen 2007); Brilliant performers as teachers (Persson 1996; Duke, Flower & Wolfe 1997; Duke & Simmons 2006); Performing (Lehrer 1987; Arjas 2002).

The interest of this research on interaction in instrumental lessons is shared by some previous studies: The sequence and pace of lessons (Yarbrough, Price, & Hendel 1994); Evaluating teaching styles and student behaviour (Madsen, Stanley & Cassidy 1989; Zhukov 2004); The nature of teacher feedback and instructions to students, and student attentiveness (Kostka 1984; Jorgensen 1986; Siebenaler 1997); Teacher modelling (Rosenthal 1984; Schön 1987; Gholson 1998); The relationship between teacher and students (Schmidt 1989; Jørgensen 2000; Rostvall & West 2001; Nerland & Hanken 2002; Kuusela 2002; Gaunt 2006); Student-centred instrumental tuition (Hargreaves & North 1997; Tuovila 2003; Calissendorff 2005; Hultberg 2008).

The research approaches above contribute considerably to the present focus of examination. This study argues moreover that Intensity of Interaction in instrumental lessons encapsulates most topics of the previous research and combines many of the lines of interest.

2.2 Intensity of teaching and learning

The somewhat ambiguous term intensity requires clarification. What does the term intensity in instrumental music lesson mean? In everyday language, intensity often refers to an important situation with great energy, strength, concentration, a high degree of emotional excitement, and depth of feeling (Madsen, Standley and Cassidy 1989). These definitions seem self-evident, however, the amount of variation in the meaning allude to the obscurity of this term. The ambiguous use of the term intensity appears not only in everyday language; also scientific and pedagogic scripture tend to characterize certain processes by the term

without further explanations⁴. For example, what do the following phrases mean: the problem solving was *intense* or the experience was *intensified*? What is behind the expression: “in the process of the expansive cycle, when the new model of activity is been built *intensively*” (Y.Engeström 1995, 89), or stating that “the lessons appear to have changed somewhat in terms of interaction and *intensity* when I was present, but they did not appear to change in content or teaching method” (Persson 1996, 27), or “the exclusivity, intimacy and *intensity* of the one-to-one relationship” (Gaunt 2006, 74); “the frequency and *intensity* of the lessons put considerable pressure on the student” (Gaunt 2006, 161). Intensity in these phrases exemplifies the character of various developmental processes.

In music education, intensity is used often in texts focusing on instrumental teaching and learning, and musical expression in particular. This literature shows how crucial the concept of intensity is to the major part of the teachers. Authorities such as Neuhaus (1973), Galamian (1962), Casals (Blum 1980) and Auer (1921) refer to intensity directly or indirectly as a major factor of, for example, phrasing, dynamics, sound, expression, and performing. With these examples in mind this study aims to identify what intensity means in the instrumental music teaching and learning context, and how it describes the interaction in the lesson.

Among quite a few studies on music education several authors have focused directly on intensity in music teaching contexts. Most of the contexts were not one-to-one settings. Teachers of these studies were in front of a group or a classroom. The term “teacher intensity” was introduced by Standley and Madsen (1987), and applied by Madsen, Standley, and Cassidy (1989); Byo (1990); Cassidy (1990); and Cassidy (1993), as a label for overall teaching quality. Duke (1999) comments that the results of these investigations indicate quite consistently that naïve and experienced observers’ overall assessments of intensity are equally highly reliable and are correlated with overall evaluations that use other terms to describe effective teaching. Madsen and Geringer (1989) also demonstrated that post hoc ratings of overall intensity and teaching effectiveness are highly correlated with assessments based on time-sampling procedures, in which results are expressed as proportions of intervals during which high quality instruction is present.

⁴ Use of the term intensity in this study belongs to the humanistic domain of science. In natural sciences for example physics and chemistry intensity is used in defining phenomena, while in religious writings, such as the Bible, Koran, and Torah, “intensity” is used to indicate powerful and energetic qualities.

Closer to the focus of this study, Duke and Simmons (2006) examined instrumental one-to-one tuition. They used the term intensity as well, and pointed out that intensity within teacher-student interaction is one central element of the process of cultivating correct, errorless playing and in effecting change in the students' performance. In their research, intensity is a key term in characterizing the lesson work. In the explored lessons, Duke and Simmons found that the instrumental lessons proceeded at an intense and rapid pace. In their description of the 19 common elements in the lessons of three renowned artist-teachers they also identified low intensity periods:

teachers seem to sense when breaks from the intense pace of the lessons are needed. In order to allow for mental and physical relaxation, teachers depart from rapid teacher-student interaction by telling interesting or entertaining stories or by elaborating on something previously discussed. (Duke & Simmons 2006, 13)

These breaks, in the interpretation of Duke and Simmons (2006), were clearly departures from the task at hand and seemed to serve as brief and pleasant diversions for both the student and the teacher. They also noticed that

once students and teachers have had time to relax, the more intense interactions resume. When the pace changes between rapid alternation of teacher and student activity episodes and longer breaks, there is little or no transition time in getting back to the intense pace. In fact, the pacing of the lessons seems almost dichotomous." (Duke & Simmons 2006, 14)

In the study "Demonstration of recognition of high and low contrasts in teacher intensity" Madsen, Cassidy, and Standley (1989) listed features that characterized intensity in teacher behaviour and effective teaching. Didactic competence appeared not only as a personal attribute but, as Madsen, Cassidy, and Stanley (1989) emphasized, also something that can be learned by guidance and experience. Through observing teacher intensity in music classes they collected and analyzed definitions for intensity, which gives grounds to observations also in the present study: their definitions are applied in observing student behaviour, and most importantly, to the character of collective meaning construction (see Chapters 4 and 7).

Madsen et al. (1989) found that intensity in terms of music education has an immediate connotation of efficiency. The relationship between teacher intensity and teacher effectiveness was strong ($r_s = .92$). The concentrated and emotionally involved active participating in teaching and learning seems to correlate with personal intensity and teacher

competence. The reliability of coding high and low intensity between judges was high ($W = .86$). The presumption was based on teacher-oriented achievement. The conclusion was that effective education in any field or area has to do with (a) student selection and (b) the demonstrated effects of teaching. Obviously, if the selection issue is the most important and the presumption states that teachers are born not made, the profession must find the important variables that constitute recruitment for effective teaching. Madsen et al (1989) point out that if skills can be taught, learned, and measured, the profession still has the same problem: What are the variables necessary for effective teaching?

To prepare future teachers for productive and effective teaching Madsen, Cassidy, and Standley (1989) found it is necessary to identify those observable, quantifiable characteristics that separate expert teachers from novices. As part of the results of the Florida research by Madsen et al (1989), the observers suggested a number of attributes needed for high teacher effectiveness and, therefore, high teacher intensity. Although the words used to define intensity varied greatly, agreement was common in identifying either high or low intensity, as well as on the overall rating of intensity. The list of defining terms below shows the degree of agreement among groups in the major ideas expressed. The accounted 260 of the 342 total responses included 14 items.

1	Enthusiastic, excited expression
2	Eye contact
3	Proximity; movement toward group
4	Concentration; attention to students or teaching; involvement
5	Strict, precise body movement or conducting gestures
6	Voice volume, pitch, inflection; change in voice
7	Energy; effervescence; vigor; pizzazz
8	No hesitation in voice; no filler words (uh, ah)
9	Planning; knowledge; competence
10	Pacing
11	Short, simple instructions
12	Good posture; change in posture
13	Confidence
14	Little talk, lots of singing; vary techniques to increase attention; as much time in learning activities as possible

Table 2.1: Definitions for Intensity by a group of observers (Madsen et al 1989)

This list of descriptions offers information for conceptualizing behavior under the term intensity (Table 2.1). The characteristics also give grounds and support to the observation process of this study. Moreover, the interactive teacher-student relationship seems to emerge in the following findings. Other than knowledge of subject matter, two recurring variables concern (a) demonstrated teacher *enthusiasm* (high teacher affect) in live, positive student/teacher interactions and (b) a sense of *timing* in relationship to classroom management and effective subject matter presentation and monitoring. According to Madsen, Stanley and Cassidy (1989, 90), both of these variables require “the ability to see oneself as others do, or to know how one is coming across”. Therefore as they conclude: “one’s social awareness seems paramount”. Teacher intensity in some ways seems to blend the attributes of “enthusiasm and timing” in that people who are perceived as having high intensity are “enthusiastic as well as effective in managing the class”. “It is difficult to imagine an intense teacher who does not possess both these qualities” (Madsen et al. 1989, 92).

Their conclusion was that all issues relating to teacher intensity need to be investigated. These issues include “student attentiveness, subject matter acquisition, the degree of intensity associated with the subject matter itself (i.e., the activity of making music), various levels of social and peer interaction that contribute to intensity, and the general level of teacher on-task” (Madsen, Standley & Cassidy 1989, 92). These themes open up a field of interest for examining more specifically student intensity and shared intensity, particularly in instrumental music settings.

2.2.1 Intensity and efficiency

Does efficiency equal good music making? The accuracy and value of good music making has been questioned by music philosophers like Bowman (2002) and Regelski (2005). Regelski (2005, 219) asks: “what is music making good for?” Why do we need to be so efficient in musical engagement or in practicing an instrument? In other words, one interpretation is that we can enjoy music and music making without the emphasis on learning. However, pedagogically musical learning is often related to musical enjoyment (Schenck 2000). The approach this study maintains does not exclude either of these two intertwined aspects. Rather, the interest here is in the emerging tension that this connection creates.

Generally, conclusions made by research regarding teacher efficiency may be due to

outcome orientation in terms of success in musical performance or career. Achieving and measuring teacher efficiency in such inference is thus related with the success of the students. One realization of this line of thinking is the music competition tradition. It seems clear that the intensity of the process when preparing for a competition is always high and stimulating. In her study on “expert” musicians Maijala (2003, 166–170) reported how this “efficiency stimulated by competition was highly motivating and in that sense meaningful”. However, as she reported, the winners felt empty and reluctant afterwards, and in some cases the processes also led to crises. These findings allude to major changes in the intensity of musical engagement after the competition. Low intensity periods after high intensity periods seemed to be imperative and in such cases good for learning through physical, mental, and artistic recovery and creativity.

The competition and therefore jury-oriented tradition is related to the professional audition traditions. In order to attain a job in an orchestra or, for example, a role in an opera, instrumental education must ensure students are prepared for the reality of the world. The culture of competition follows the educational line of the master–novice tradition (Schön 1983; 1987) with historical consistency with the apprenticeship tradition (Lave & Wenger 1991). The organization of the educational programs centers on the teaching of the principal instrument – interaction between the student and a distinguished performer of the instrument. Among students, parents, and audiences of, for example, master classes the expectations assume that students will receive unique information and musical qualities from a master. Hence, teaching practices draw upon discourses that are produced and kept alive within a broader social field. These conceptualizations become even more powerful as a result of the authority attributed to the teachers by the students, who commonly approach teachers precisely in order to gain access to that particular teacher's musical insights. These students deliberately subject themselves to this teacher's ideas (Nielsen 1999a, 1999b; Nerland & Hanken 2002; Nerland 2003).

Instead of seeing instrumental teaching and learning simply in terms of effectiveness or ineffectiveness, this study aims to widen the educational scope of the instrumental music lesson to include the recognition that the teacher, and the institute, can offer a meaningful context in which the musical engagement flourishes: the student learns music musically (Swanwick 1999; Bowman 2002). On the one hand, such widening of musical studies may

slow down the skill-oriented instrumental learning. Culturally the seemingly low intensity periods of “being-with-music” (Custodero 2005) might be important at certain times in terms of musical and personal growth. On the other hand, this kind of maturing period, with inattention and introspective pondering, would then be beneficial for the musical studies as a whole. In the instrumental lesson context, the low intensity periods within interaction would therefore paradoxically end up being efficient.

Learning might also be delayed or deferred until the time when an individual is able either to assimilate new knowledge into existing schemas or to alter these frames of reference to accommodate the impending change. Furthermore, the validity of simply predicting and observing behavioural change as a basis for evaluating the effectiveness of teaching and learning has been questioned by scholars (Stenhouse 1975; Eisner 1985; Hakkarainen 2002a).

All in all, efficiency concerns intensity, high or low, within instrumental lesson work, and therefore the ultimate purpose of this study. However, this study avoids stating that intensity within the lesson interaction, and even high or low personal intensity, would have straightforward connections to good or bad teaching and learning in music education. Conclusively, the concept of efficient musical teaching and learning remains rather imprecise, if we do not replace efficiency with a more qualitative expression and focus on the character of the process of musical and pedagogical problem solving.

2.2.2 Intensity, flow, and involvement

As a continuous setting, musical enjoyment raises questions concerning meaningfulness and motivation. Motivation has different levels (e.g. Majjala 2003), but at the level of action, meaningfulness means optimal balance between challenge and skill. In order to maintain the optimal experience of musical engagement, as Csikszentmihalyi (1990) and Custodero (2002b) explain “the state of flow”, the musical complexity must increase. Accordingly, when we attain the increased complexity, we are learning.

The phenomenological perspective applied by Csikszentmihalyi (1990) uses the concept of involvement when describing the “state of flow”. This means a certain state of mind in which the utmost involvement is present. An involved person is characterized by the concentration on a relatively limited object, and he or she is not easily disturbed and is able to

continue the task persistently. He or she is extremely alert, sensitive, open to and receptive for stimulus meaningful for himself.

Intensity of musical engagement might appear to have the same characteristics as the state of flow. Yet, in comparison with the optimal experience this study maintains that the intensity of lesson interaction connotes a wider and deeper learning process by specifying the content, context and the purpose of the action. Learning in flow-experiences refers to the perfect match of ability or know-how that enables the learner to meet challenges with a complete focus and concentration. The psychic energy of attention is fully taken up (Custodero 2002b). These kinds of experiences frequently include a loss of self-consciousness. The flow appears with power currents working towards the same direction. This is one important part in the process of empowering a young artist, but not all of it.

While involved, a word or an expression can be felt very intensively and perfectly. In these cases a lot of energy is released. This positive experience of energy is connected with the feeling of satisfaction. This feeling is influenced by the entity of motives which Laevers (1994) crystallizes with the concept of the need for exploration. As part of the Experimental Education, EXE-project⁵, Laevers (Laevers & Hautamäki 1997) reports two main quality indicators: emotional well-being and involvement. He states that contentment by itself does not indicate development. We also need involvement.

Involvement and the state of flow as a two-way interaction process in instrumental lessons come close to the interest of this study. The similarities between involvement, the state of flow and intensity within interaction seem quite clear. The distinction, however, may be traced in the depth of socially meaningful processes, where shared and constructed meanings are transferred in a meaningful context. Compared to Intensity of Interaction, involvement is more like an overall attitude attributable to the mental state of individuals. The state of flow is experienced in a specific action, whereas intensity characterizes the process of constructing meanings within interaction with dimensions like shared object, time, emotion and concentration. In flow, there is a balance between challenge and know-how whereas in shared meaning processes the balance is between time-space, emotions, mode of action and the content.

⁵ The Leuven model of the Experimental Education is an effort assessing quality in preschool and day care. They provided the LIS-YC process assessment tool, Leuven Involvement Scale for Young Children scale, which concentrates examining what happens in a child under conditions created by the teacher.

In his search to identify the intrinsic motivations for engaging in a variety of play and work activities (e.g., chess, rock climbing, surgery, basketball) Csikszentmihalyi (Csikszentmihalyi & Csikszentmihalyi 1988) concluded that one common reason is the opportunity each activity offers for experiencing flow. In flow, people not only forget their problems but temporarily lose the self-consciousness that can intrude on everyday life. "At the most challenging levels, people actually report experiencing a *transcendence* of self, caused by the unusually high involvement with a system of action" (Csikszentmihalyi & Csikszentmihalyi 1988, 33). Such an experience naturally would belong in the meaningful learning process of an instrumental lesson, at a certain period of time. The multifaceted elements, however, in learning music and instrumental expression can easily become too complex for immediate success in performance. Therefore in such cases, experiencing flow is hampered. This kind of obstruction may lead to problems in motivation. Furthermore, in the light of the starting points of this study, one might think that a constant reach for flow narrows down the musical learning dramatically and may distort the overall balance of the lesson interaction. This is not quite accurate according to the criteria concerning the musical flow. Custodero (2002b) emphasizes three distinct features of flow in the process of music making that, in fact, widen the learning process of flow. The features of flow are anticipation, expansion, and extension.

2.2.3 Criteria of musical flow

The first criterion of flow in music making, according to Custodero (2002b), is anticipation. Anticipation typically frames the activities in teaching and learning music, as well, and in developing instrumental technique. Anticipation as mental or physical action, in Custodero's (2002b, 7) definition, attempts to demonstrate "what comes next" during the presented activity. Through anticipation, learners attempt to construct the presentation of materials themselves, transcending a passive role through active participation.

Anticipation represents a testing of hypotheses regarding the next moment and provides an observable indicator of students' attempts to act as agents in their own learning. Promoting anticipation entails preparing an appropriately sequential delivery, while allowing space for students to have access to its unveiling through their own discovery process. (Custodero 2002b, 7)

In the teacher-student musical interaction Custodero's definition of anticipation means awareness in expecting and in sensing the next step of one's own and the other person's reactions or initiations.

A relevant theoretical perspective in this discussion on anticipation is David Huron's (2007) scheme of expectation. In his theory, Huron distinguishes between two classes of pre-outcome responses: the imagination response and the tension response. The imagination response entails those feelings that are evoked from thinking or day dreaming about possible future outcomes. Thoughts about the future are accompanied by feelings that make the various outcomes emotionally palpable. These vicarious emotions in turn shape our subsequent actions.

The second pre-outcome response in Huron's theory is the tension response. It refers to a pre-outcome limbic reaction that arises from changes in arousal and attention, in preparation for some expected event. Expected events receive a more positive response than unexpected events. The most obvious emotions in the post-outcome epoch are those that pertain to the pleasantness of the outcome itself. Once the outcome is known, our emotions reflect some sort of assessment of the new state. Huron (2007) calls the fast response a reaction response, and the more complex, slower, response an appraisal response.

Both pre-outcome and post-outcome responses arise from the functionally distinct neurophysiological system. In Huron's theory, each response system solves an important problem in tailoring behavior so that it is optimally adapted to a given environment. When emphasizing anticipation, the musical and pedagogical actions create expectations for a forthcoming situation, such as the next musical lesson or performance. In interaction the parties anticipate each other's statements and musical actions. In other words, the teaching and learning strategies such as modeling, scaffolding, coaching, and fading (Byrne 2005, Daniels 2007) anticipate the mode of evolving musical learning process.

The second criterion of flow is expansion (Custodero's 2002b). Expansion, which involves broadening the expected and/or modeled responses to encompass a wider interpretation of the activity, was

a fully observable strategy by the preschool years and has been witnessed in instructional contexts through young adulthood. By expanding an activity learners go beyond artificial boundaries and exhibit creativity. Expansions typically involve rhythmic movement, gestures

reflective of song, text, of novel use of materials (musical instruments and props such as scarves). Promoting expansion means offering simplified modes so that they can serve as themes ready to be varied by students. (Custodero 2002b, 7)

The participants expand the music making process, for example, by methods of improvisation. During such process the teachers and students add and combine various musical and pedagogical ingredients in their music making. In instrumental lessons, however, the purpose of learning instrument specific elements guides the amount of flow. On the one hand, it would be only harmful in some cases to go on playing with, for instance, squeezed hands and a stiff neck. Instrumental teaching and learning consists of matters that necessitate slower pace; periods of reflections and relaxing also are important for learning (e.g. Duke & Simmons 2006). On the other hand, the continuation of flow through expansion necessitates development of the structure, as well. This leads to the third approach relevant in understanding the musical flow.

In Custodero's analysis the third criterion of musical flow is extension.

Promoting extensions means designing activities that can be replicated and expanded by children (and observed by adult educators) in multiple contexts in and out of school. This calls for serious rethinking of school structures, which are usually not conducive to the long-term exploration of single ideas. (Custodero 2002b, 7)

Custodero connects the musical flow with the development of music education structure. The point this study maintains is the relationship between the content and structure, and the two way development between them. Rather than only shaping the structure of the musical studies at the administrative level, the musical and pedagogical innovations in the lessons also entail and guide development in the overall structure.

Further on, this study is interested in what way the criteria of the state of flow are connected to Intensity of Interaction. This concerns the dynamic character of musical and pedagogical processes and interaction through anticipation, expansion, and extension. I will return to these features of instrumental lesson in the discussion of the results.

2.2.4 Intensity, group flow, and jamming

Successful performance of tasks, as well as experiences of flow and involvement, may support learning on a personal level and lead to an intensified experience (Dewey 1934). To point out the delicacy of performing together, a good ensemble performance does not always

emerge, even if the individual performers are prepared and focused. As a shared experience, intensity, however, can mean that the loss of self-consciousness takes the form of united awareness. Sawyer (2006, 157) refers to it as being in *group flow*: “when a group is performing at its peak in the same way that an individual performing at his or her peak often experiences a subjective feeling of flow”. There are many metaphors one can use to describe a talented ensemble when they are ‘on’, in interactional synchrony, performing well. One might say that they have a *good chemistry*, or that things are *clicking* or *in sync*. For just about any sports team, one can speak of the *group spirit*, the *team spirit*, or the *esprit de corps*. A commentator might say *they gelled as a unit* or that they displayed *good teamwork*. All of these metaphors focus on the entire group and on their performance together as an ensemble.

Group flow is a property of the entire group as a collective unit. In group flow, in Sawyer’s (2006) words, everything seems to come naturally; the performers are in interactional synchrony. In this state, each of the group members can even feel as if they are able to anticipate what their fellow performers will do before they do it. Group flow is an emergent property of the group. Group flow can inspire musicians to play things that they would not have been able to play alone, or that they would not have thought of without the inspiration of the group.

For example, Eisenberg (1990) describes this kind of intensive experience by the term jamming. For describing characteristics of jamming, Eisenberg (1990) quotes musician David Byrne, who hints at what it is like to jam in performance:

In concert, where all the musicians are playing, and you kind of subsume yourself and some part of the community of musicians. They, in turn, become part of the audience. And everybody senses that. It's not a rational realization. It's a visceral realization that you're part of a larger whole. (Thompson, 1988, 49)

Eisenberg (1990) emphasizes how such action may occur under conditions of minimal self-disclosure and limited consensus. Borrowing a term from music and sports, he describes characteristics of “jamming” experiences, instances of fluid behavioral coordination that occur without detailed knowledge of personality. The development of equifinal meanings requires some degree of ambiguity in communication. Fluid behavioral coordination unhindered by expectations for self-revelation characterizes jamming. Jamming encourages both cooperation and individuation. Jamming experiences provide an opportunity to transcend

the autonomy-interdependence dialectic, simultaneously allowing for the possibility of both. These experiences are refreshing, as they satisfy cravings for both closeness and independence. Similar to mutual equivalence structures, jamming experiences are highly rule-governed, structured activities in which little or no personal information is exchanged, yet important goals may be accomplished, and a strong, ecstatic bond is formed among participants.

Maintaining a balance between surrender and active participation can sometimes be tricky, and moments out of balance are inevitable. The jazz bassist Red Mitchell comments on how such moments of imbalance may even jeopardize the definition of the situation.

When – and I don't mean if – the cycle gets too far out of balance one way or the other. For example, too much or too little planning or form, or too little or too much freedom of improvisation, the musicians themselves will probably start saying, this isn't really jazz. (Eisenberg 1990, 3)

These characterizations of jamming seem to come close to what this study means by intensive interactive musical communication. Eisenberg introduces four essential characteristics for jamming. Jamming (a) is transcendent, (b) embraces diversity, (c) is fragile, and (d) can be risky (Eisenberg 1990).

Firstly, jamming provides an opportunity to transcend the dichotomy between autonomy-interdependence, simultaneously allowing for the possibility of both. Eisenberg (1990) states that in a fundamental way, jamming experiences both transcend the individual and enrich the life of the self. Similarly, intensity within instrumental lesson interaction means that the teacher and the student personally add to the shared musical problem solving. At the same time both gain something in return.

Secondly, to embrace diversity means to relate to each other mostly through music. Seamless performance conveys a joyful, encapsulated feeling of total involvement. When the experience is over, however, participants know not *so* much the details about each others' lives but mainly that they performed well together in a specific situation. Later, these same people may meet and have little to say to each other beyond a passionate retelling of the experience. Still, they can be grateful for the special bond that developed. In instrumental lessons, when learning happens mainly through music and by musical interaction, the teacher-student relationship can remain somewhat unpersonal or distant. Still the musical

involvement, a mutual experience, may lead to a functional relationship between the instrumental teacher and the student.

Thirdly, the fragility of jamming is evident in that it can never be routinized, habitual, or linked to a specific set of antecedents. Nor is it necessarily self-sustaining once begun. Jamming requires clear rules, structures, and expectations (and especially expectations about appropriate levels of disclosure). Asymmetrical expectations can lead to mixed signals and disappointment. For jamming to occur, expectations are best kept low. To be successful, one must surrender to the experience, engage faithfully and respectfully in the interaction, and not *use* the exchange to unload on, show off, or control others. In instrumental lessons, control becomes sometimes the main purpose of the activity. Students, for example, expect the teacher to control their playing habits. Constant control, however, often leads to teaching habits which are so predictable that they may become redundant and a nuisance for the learner. To help learning, fragility in interaction provides alertness to emerging new possibilities. Fragility in musical interaction and learning presumes, as in jamming, clear rules and structures.

Fourthly, risks are taken when one is engaged in jamming; something of one's self is on the line, although not in the usual way through revelation or verbal disclosure. One aspect concerning risk, according to Eisenberg (1990) is psychological: a player risks embarrassment if his or her skills are found to be insufficient for the game. In jamming one also risks exposing unresolved emotional issues that may be triggered by the intensity of the game. Similarly, intensity within instrumental lessons is risky, because it requires openness (see the Introduction). Both the teacher and the student reveal some part of themselves more or less openly to the musical learning process.

These sections have described the *process* of teaching and learning through intensity, flow, involvement, and jamming in making music. The next sections focus on *interaction*, which is the second aspect, relevant for teaching and learning in instrumental lessons.

2.3 Musical interaction in instrumental lessons

Musical interaction in the context of musical teaching and learning includes both individual and social perspectives. These perspectives offer an overview of the contribution that different pedagogical approaches make to immerse students in what Swanwick (2008)

calls the potential space of musical activity. Relevant for this study in structuring musical activity in different pedagogical settings are the above mentioned (Section 2.1) three principles by Swanwick (2008): Care for music as discourse, care for students' musical fluency, and understanding the teaching context. These focuses on music, on the student, and on the teaching context create pedagogical possibilities for the lesson interaction. Approaching the instrumental lesson interaction from the individual perspective means that the focus of the research is on the teacher, student, or the music. The social perspective takes into consideration the shared and historically developed context of the instrumental lesson interaction. The following sections conceptualize teacher, student and music-centered approaches in lesson interaction.

2.3.1 Teacher-centred lessons

Teacher discourse has been in the focus of quite a few studies on instrumental music lessons (e.g., Madsen et al 1989; Nerland 2003). The perceptions of instrumental music students have also been of great interest in research studies at the beginning of the 21st century, while student autonomy has become an increasingly important topic in pedagogy (Sloboda & Howe 1991 and 1992; Howe, Davidson, Moore, & Sloboda 1995; Calissendorff 2005; Tuovila 2003; Gaunt 2009). Both teacher-centered and student-centered views offer important aspects for teaching and learning music. They emphasize the importance of the pedagogical competence of the teachers, the significance of student autonomy and their relation to musical material as well. The personal relation to music has flourished especially in the institution of the master performer as a teacher.

The master-teacher tradition seems to be connected to a wider phenomenon in Western culture. In her examination of individualism in music education Westerlund (2002, 96) pointed out "how the angle of examining the self has gradually turned towards individualism". The rise of romantic philosophy based on Cartesian-Kantian tradition in aesthetics led to the emphasis of the "western individual" (Westerlund 2002, 96). Accordingly, the cultural signs, such as master-novice teaching and soloist career of instrumentalists that indicate the Western individualization, have been maintained in instrumental tradition (Louhivuori 1998). Western classical music culture has partly followed the romantic discourse, which identifies the view of music making as "the heroic act of a

lonely genius; the idea of a lonely male genius with no relation to anything but an inner well”, as Johansson (2008, 55) puts it. In her description, the 19th and 20th century musical philosophy is still a powerful aspect of the modern concert tradition, which builds on the conception of an individual creating in separation from listeners, and always maintaining this distance. Common rules are then individualized and have become abstracted from the surrounding context; the performer’s connection both to the audience present and to the situated moment has mostly limited relevance.

Such master musician oriented concert tradition lives in harmony with the master dominating instrumental one-to-one music lesson structure. In teacher-centered pedagogy, the aesthetic quality and standards are supposed to pass efficiently from the teacher to the student. This transmission process, however, can be contradictory with the aims of initiative, self-sufficient growth of a student, if the one way transmission inactivates or frustrates the student. This is particularly the case, when the ultimate purpose is to educate a vivid self-sustained and creative musician (Tuovila 2003).

The research on instrumental teaching and on one-to-one tuition at the turn of the century, before and after year 2000, provided extensive evidence of the asymmetrical, teacher dominated interaction in instrumental lessons within Western music world wide.⁶ Gaunt (2006) surveyed, as well, a number of studies in Britain and the USA of instrumental teaching and learning in her thesis. The findings of the available research have provided a rather scattered and manifold description of the instrumental lesson interaction. In sum, the asymmetrical, teacher dominated interaction was evident in all one-to-one lesson studies (see also, Zhukov 2004). Gaunt (2006) found among others that most of the teachers in her study of higher music education conceptualized one-to-one instrumental/vocal tuition in terms of transmission or apprenticeship (see Section 2.2.1).

In USA, Rosenthal (1984) worked with advanced tertiary level instrumentalists and highlighted the power of modeling as a key teaching strategy in promoting accurate performance. Whilst the efficacy of modeling was clear, the study did not consider its long term effects. Gaunt (2006) specifies that research on long term learning, meaning a period of

⁶ About 100 research projects worldwide addressed as part of their results the asymmetrical teacher-student relationship in the Conference of Reflective Conservatoire in Guildhall School of Music in London 2006.

time ranging from a few days to years, should include level of performance, motivation and student autonomy.

Another example of teacher domination is Schön's (1987) study on master classes. An analysis of a pianist's modeling for an advanced student was made by Schön as an example of reflective practice. This conceptualized setting of one-to-one tuition seemed to embody tensions relating to the detailed purposes and processes. The engagement of the student was on the teachers' terms. The teacher used the class environment to reflect on and re-create the interpretation for the student, and, essentially, the students were passive recipient of this process, imitating to achieve the same effects. Schön (1987) reported that the reciprocity focused on the means of the interpretation not on the design of the interpretation. The reflection seemed to be based on teacher's ideas on developing the student's ideas.

An asymmetric pattern of interaction seemed to also dominate the lessons in the study by Rostvall and West (2001) of instrumental lessons in Swedish music institutes. The teachers controlled the definition of the situation and student initiatives were ignored in the lessons they observed. From the "institute theory" perspective, the major conclusion was that the way instrumental teaching is organized leaves little room for students and teachers to discuss and reflect on the teaching process. Rostvall and West (2001) argue that development of reflection and lesson activity is related to the development of the context of the lessons, for example, the organization of an institute and the national curriculum of instrumental music education. Their findings reinforce the meaning of the relation between the development of lesson interaction and the structure of musical studies. The relations between organizations and education policies are not, however, within the scope of this study. Rather, this study focuses on the core mechanism, character, and dynamics of the instrumental teacher-student interaction.

The roles and goals of the teacher

In terms of understanding the teacher and student roles and relationships, the mere characterisation of lesson interaction as asymmetrical by itself is only partially informative. For understanding the diverse roles of a teacher, Hargreaves and North (1997) have proposed a conceptual model of teaching methods that identifies music educators with two orthogonal dimensions, namely "specialist-generalist" and "control-autonomy" (Figure 2.1). By

analysing the discreet variation of teachers' roles and methods, Hargreaves and North associated different pedagogical approaches with each of the four quadrants that result from the orthogonal dimensions. Although the quadrants were originally designed for music education, in general, these quadrants seem to fit the purpose of examining the teachers' role in instrumental lesson context.

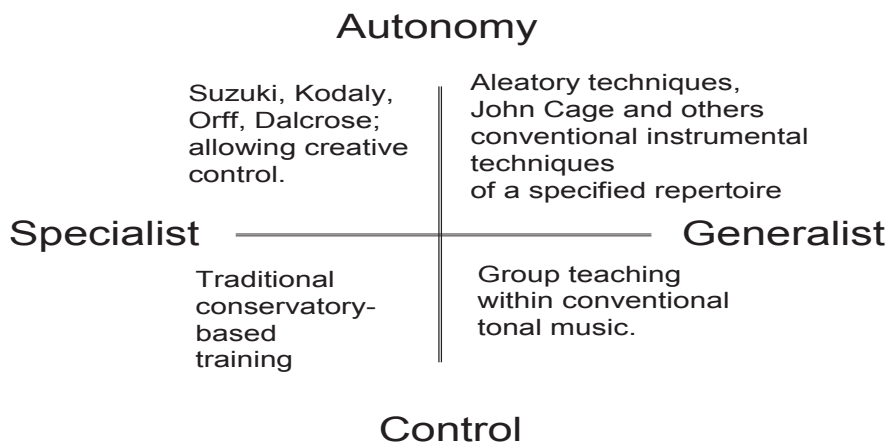


Figure 2.1: Conceptual model of teaching methods (Hargreaves & North 1997)

Traditional conservatory-based training could be located within the “specialist-control” quadrant, since, according to Hargreaves and North (1997), the typical “classical” conservatory training requires a great deal of detailed, high-level study of a relatively circumscribed repertoire of composed music. The teachers of “specialist-autonomy” quadrant are located within special institutions like Suzuki, Kodaly, Orff, Dalcroze or the like, but favour allowing students a great deal of creative control. Within the “generalist-control”, it is possible to identify group work, like instrumental group teaching within a fairly constrained framework of conventional tonal music. Hargreaves suggested that suitable examples of the “generalist-autonomy” quadrant may be provided by the aleatory techniques of composers such as John Cage or others who do not rely on conventional instrumental techniques of a specified repertoire. Olsson (1997) commented the model by Hargreaves and North arguing that although the model is still approximate and provisional, it may be able to provide a link between research on teachers' methodologies, training backgrounds, values and styles.

The teacher's role and methods are related to the alternating teaching and learning strategies. Strategies are generally conceived as deliberate or purposeful processes, originally consciously applied, but normally undergoing automation as a result of development and practice (Nielsen 2001, 2004). The process of development in the practice of teaching and learning depends on various musical and pedagogical decisions and situations (Elliott 1995). Charles Byrne (2005) describes the overall strategic shift as follows:

as learner's move from learning that is regulated by the teacher (modeling) to self regulation (fading), they pass through the current zone of proximal development⁷ and arrive at their next own 'growing edge' of skill or understanding. (Charles Byrne 2005, 312)

His statement refers to a shift in teaching and learning strategy, which enables a learner to move from being passive to active and also implies a shift in emphasis from active to passive teaching, through modelling, scaffolding, coaching, and fading. Elliott (1995) adds to it the processes of articulating, comparative reflecting, and exploring. Articulating includes any means of helping students express their "personal approaches to musical problem solving". Comparative reflection expresses "the differences among students' reflections". In exploration students become "critical and creative musical thinkers by generating and selecting musical problems and solutions themselves" (Elliott 1995, 280-281).

Rostvall and West (2001) explicated the strategies in their investigation on instrumental lesson interaction by experimental, directive, accompanying, analyzing, and expressive use of speech and music. When teachers apply these strategies in relation to what students require to stay "centered in the musical flow channel" (Elliott 1995, 282), it creates multi-dimensional possibilities. Such a progressive and situated approach to instrumental music education offers and requires a constant moment-to-moment adjustment of teaching and learning strategies and the teacher's role as well.

Different roles of the instrumental teacher seem to relate to the goals of playing an instrument or singing. Goals such as learning instrumental technique, experiencing music, and personal growth are for Robert Schenck (2000) examples of three different roles: instrumental teacher, music teacher and pedagogue. Schenck emphasizes the good balance between these three roles and goals. Particularly important for him is the balance between the instrumental

⁷ Zone of Proximal Development (ZPD): The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or I collaboration with more capable peers (Vygotsky 1978, 86)

and non-musical goals like the social meanings of music to the students. Westerlund (2008) explains that while defining the ends and purposes of music, educators have commonly made a distinction between 'aesthetic' or 'musical' and 'utilitarian' purposes.

Using this distinction, aesthetic usually refers to the musical and artistic goals of music education, for instance, understanding, experiencing, or cognizing the values and principles of music, whereas the utilitarian rationale has referred to various educational benefits such as the development of self-discipline, self-esteem, or the social significance of music-making. (Westerlund 2008, 80)

Westerlund points out that the ultimate end of neither music nor music education is extra-musical. Highlighting of musical values in music education also emphasizes the role of an instrumental teacher as a musician and expert in music.

The global view of music education offers an interesting view of how different aims and goals in music education and its cultural context affect the role of a teacher. Hargreaves, Marshall and North (2003) found culturally clear East-West differences. In contrast to Western instrument or art concentration, Eastern art education places much greater emphasis on the moral and spiritual role of the arts. The methods are, however, heavily teacher-centred in Eastern counterparts whereas in, for example, the UK, as Hargreaves et al. (1996) have pointed out, highly pupil-centred creativity movements in which pupils' self-expression and originality are seen as far more important in the early stages of learning than technique or tradition.

Such variety of aims and goals naturally has an impact in the roles of the teacher during a lesson. In addition, the aims and goals concern the student's position and role as a subject of an instrumental lesson.

2.3.2 Student-centred lessons

In recent years, the emphasis in research on instrumental lessons in the Scandinavian countries, along with for example the UK, has been transferred from a focus on teacher efficiency towards an interest in student autonomy and students' learning. In Finnish music education, the national curriculum in 1994 expresses the student-centered approach. Following this, the child- and music-centered goals were expressed also in the nationwide curriculum recommendations for music instrumental teaching and learning (Opetushallitus 2002, 2005; Tammissalo 2005). In contrast to the teacher-centered approach, the student-

centered pedagogy clearly motivates and enriches the student's musical hobby. What conditions then ensure the personal positive value of the learner's music education? Hargreaves, Marshall and North (2003) offer an answer by placing the development of individual self-identity at the centre of their model of potential outcomes of music education. The model combines musical-artistic, personal and social-cultural outcomes of music education by an intertwined circle.

The findings of student-centered music education are of great importance for this study, because the interaction in focus of the investigation attempts to find reciprocal activity. Research-based knowledge and understanding of student beliefs, expectations and thinking has emerged only recently. At the same time, the work of instrumental teachers is challenged by the wider awareness of students' potential. Students' musical choices, innovations on music and playing an instrument, or expressed possibilities of interpretation do not undermine teachers work, quite to the contrary. For example, Custodero (2002b) points out that the adult or the teacher is needed for the aesthetic quality work and in the long run in setting the optimal challenges and providing the musical tools for the student. In Custodero's findings the adult awareness was linked to perceived challenge, creating a single dimension which predicted flow; in the companion longitudinal study, patterns of parent-defined challenge were found to be consistent over time and influenced children's quality of experience. When adult intervention was invited, implicitly or explicitly, and when it provided access to clear goals and feedback while also nurturing the child's autonomy, children were in flow. When adult intervention interfered with the child's taking ownership of the musical material, flow was obstructed.

The results in Tuovila's (2003) research on children's music making and music school studies demonstrate the importance of a student-centred pedagogy. She found that music making is based on children's own spontaneous aural sense of music. Listening, singing, playing and dancing merged to form holistic, improvised music activities and musical games. The children integrated the musical know-how of adults, other children and as well as formal music teaching into their own spontaneous music making. This happened only if the guidance received was evaluated as positively significant and useful for independent music making.

In Tuovila's (2003) study the most important factor in explaining the learning outcomes was whether the child felt that his or her goals and proposals had an effect on teaching and

practise situations. The gender, musical self-esteem and musical skills of the child as well as the musical skills and support of the parents were of crucial importance for the extent to which the desires of the child became evident. Conditions for meeting children have to be organized, according to Tuovila, in such a manner that the children can decide on their own how and in what time the collaboration will happen. Dialogue is possible when children can use common time in the way they want. It is not enough to now and then give time or optional activity possibilities for the children. Such compensations are basically only means for motivating children to the expected good timetable. Instead of such temporal concessions, the adult-centred form of activity has to be questioned. Only then can the children bring out the full richness of their way of outlining the world.

Tuovila and Custodero (1998, 2005) also emphasize interest in the music-making children do on their own without adult supervision, and in what the music made by children is, who plays it, where, when and why. Mostly, the questions have concerned what the children are able to perform in music. Questions concerning how the children experience, make or value music have so far remained unanswered.

Moreover, the experiences children gather seem to influence the emotional and musical meaning of musical engagements later on. Among others, Custodero carries out research projects on children's musical engagement (Custodero 1998, 1999, 2000b). By referring to manifold examples of childhood musical experiences, she brings the significance of "being with" the materials of music to the fore. Children first come to know the social world by reading the intensity and durations of sounds, which are musical cues in their parents' voices and responding in kind (Custodero 2005). Recollections of early experiences tend to be deeply embedded and sensory: They often involve imaginative interpretations of and intense emotional response to specific works, and they activate memories of "belonging" associated with singing, dancing, and playing instruments in groups and in more intimate contexts.

In higher music education, musical background with multifaceted musically filled path (Tuovila 2003; Custodero 2005) often ends up in favour of those who survive as musicians continuing their musical studies at higher music education. At the same time these students have received instrument specific training, which is efficient, often because of the teacher dominant character of interaction. In some cases one could conclude that the students have survived in music in spite and in some cases because of the teacher dominant instrumental

teaching. Ultimately, while teacher dominance at early stages cultivates instrumental and musical competence, it may at the same time narrow down students' own musical awareness. Consequently, these students are supposed to find their musical autonomy again in higher education (Gaunt 2006). As Gaunt (2009) reported, the experience of students with several teachers was that this promoted their own autonomy and confidence as learners. The teacher's leading role may also end up reinforcing student independence, when a master teacher merely points out the goal of the musical expression and leaves the details and rehearsing process to the student (see Gaunt 2009). Nevertheless, whether students' learning is an independent or an interactive process, research on music education has emphasized students' responsibility for their own learning (e.g. Jørgensen 2000; Tuovila 2003; Gaunt 2006). However, not all students want independence. According to Jørgensen (2000, 71), "they want to learn the prevailing conventions; they want to conform." Some students react with anxiety to the given freedom in organising their work and in their own musical judgement.

One approach in enabling student autonomy is to provide the students with more time, ears, and heart for reflection. The significance of reflective practice in learning and for unloading emotions, according to Gaunt (2006), receives mutual agreement by teachers and students. Autonomy of the student was in Gaunt's accounts, however, not always stimulated in one-to-one lessons, even though this was an aspiration of many of the teachers. Furthermore, the links made between teacher-student interactions and professional contexts were often limited. It seems we don't always realize the need for such discussions or connections, nor do we have time, place, or tools for these issues. St. John (2006) suggests that, if the teaching agenda begins with the *child's* perspective, that is, if the child's interpretation of the teacher-defined task is honored, scaffolding will lead to a new place not yet known to either partner.

Conclusively, the student centered approach emphasizes the musical lesson tradition as an example of reflective practice. Schön (1987) suggested that the development of reflective practice, as a cornerstone of apprenticeship, is dependent on at least two components: reflection-in-action and reflection-on-action. However, as Gaunt (2006) argued, without creative engagement in both reflection-in action and reflection-on action in ongoing interrelated cycles, it becomes more likely that the professional practicum – where Schön's apprenticeship is situated – returns into an inward looking learning environment where

“challenges and the continual development of new practices are not stimulated” (Gaunt 2006, 59). Therefore, Schön’s model of apprenticeship may in fact fall short and fail to fit comfortably with the climate of change in music making and professional opportunities in the 21st century.

The teacher or student centered approaches have emphasized how to organize and manage the lessons, and guide students to independent and collaborate work. In addition to the aspects concerning teachers and students this study maintains, as a starting point, that the focus on musical interaction in instrumental lessons constructs one of the core means for musical cultivation and empowerment of growing musicians.

2.3.3 Music-centred lessons

Institutional meetings and research often focus on organizing instrumental education and managing the musical work at a lesson. Passion for musical expression, however, in the view of this study is born through and in music. Exploring music, being involved and active in and with music is absolutely crucial and important for learning musically (e.g. Swanwick 1999; Bowman 2002; Heikinheimo 2005). Therefore, the focus on musical material and learning how to play are obviously inseparable. Thus, music in the centre of the pedagogical work of the instrumental lesson corresponds to the focus of this study.

In the perspective of this study, free musical sessions bear potential, when invited, for supervised sessions, with cultivation and preparing for a performance. The point is the quality or character of the interaction. Custodero’s (2005) idea of ‘being with *music*’ relates to free and loose, listening and doing with music, without external push or energetic goal orientation. Folkestad (2006) describes the informal learning process and the switch between the formal and informal ways of approaching musical learning. He emphasizes that “the most important issue might not be the content as such, but the approach to music that the content mediates” (Folkestad 2006, 142). According to Folkestad, music orientation focuses on *what* interconnected with *how* (means-ends). This connection of the nature and origin of the music in question with teaching and learning strategies of an instrument is central for this study as well.

As a starting point, the definition of music in this study appears to be multifaceted. The teachers and students participating seem to define music as both practical (e.g. Elliott 1995)

and social (Davidson 1997; Hargreaves & North 1997), as well as cultural-historical and aesthetic (e.g. Langer, 1953; Louhivuori 1998; Scruton 1997; Torvinen 2007), and as a combination of these (Westerlund 2002). To view music in the lesson interaction with such a mixture of definitions is not controversial or aleatoric for the purposes of this study. Actually, the interest here is in the dynamic varieties of approaches to musical learning that take place in the lessons. In other words, the shared work by the teacher and the student articulates the definition of music and means for learning musical expression.

Under such multilayered musical and pedagogical engagement, the concept of music-centred lesson combines the sound producing with all features of instrumental technique and musical expression with all the musical elements of a composition. Music-centred interaction aims to prevent the bias of both the teacher-centred and the student-centred pedagogical perspectives, because they seem to construct problematic and more or less asymmetrical lesson interaction settings. Enthusiastic teacher presentation or musical actions may frustrate the yet not-so-ready-to-throw-in-him/herself student. The student oriented let-him/her-find-the-way-lesson as an extreme version may end up as a collapse of interest of both the teacher and student (Heikinheimo 2005).

The fact that the musician and the musical material are intertwined and influence each other is a central starting point here. The framework of this thesis maintains that the musical performance involves an ongoing dialogue between the composer and the performer, the musical material and the musician. Musical engagement is a dialogue across generations, in which according to Scruton (1997, 445) “the dead play as great a part as the living”. Davidson (1997, 211) points out that there is a tension between the past structuring the present and the present structuring our interpretations of the past. Music-centered instrumental lessons deal with the musicians’ personal relationship to the musical material and with musicians themselves and their musical process. Similarly, Dewey (1934) wrote that

the object should not be seen in isolation from the process that produced it, nor from the individuality of vision from which it came. Theories which simply focus on the expressive object dwell on how the object represents other objects and ignore the individual contribution of the artist. Conversely, theories that simply focus on the act of expressing tend to see expression merely in terms of personal discharge. (Dewey 1934, 85)

As I pointed out in the beginning of this chapter, the process of music making and interaction of the musicians are intertwined.

For the specific interest of this study, the features of intensity are fully present in music. Thus, the dynamics of musical processes offer tools for understanding intensity within instrumental music lesson interaction. Musical intensity is a direct experience with the peculiar tension that leads us, upon hearing one tone, to want its resolution in another, or tension and resolution through harmonic or rhythmic progression (e.g. Scruton 1997). In music, as Scruton (1997) explains,

tension can also be heightened and extended by resolving dissonances into dissonances – i.e. resolving the tension between some of the voices only to create a new tension between others. A sufficiently firm tonal background will enable the composer to augment the tension to agonizing extremes in this way. (Scruton 1997, 266)

The temporal quality of musical engagement, whether it be performing, composing, or listening, requires a fusion of doing and perceiving. In music, we face ourselves and make sense of the world. In making sense of the world, music is according to Custodero (2002b), the tool of cultural expression and at the same time the outcome of the cultural process. In making music, the product and the process are in fusion. Custodero (2002b), who studied musical engagement of children at different ages, continues to say that children's inherent motivation to learn is artistic in nature, its artfulness defined in part by this simultaneity of the internal cognitive process and its external manifestation. Such interactive music oriented processes at all levels of instrumental lessons are the focus of this study, as it aims to identify and examine Intensity of Interaction.

In addition, the focus on music unites performers and listeners. Most performances are also social events – occasions of making and experiencing music together. Alfred Schutz (in Scruton 1997, 438) emphasizes that the “mutual tuning-in relationship” in musical performance transcends the barrier of “I” and “thou” into the realm of “we”. This relationship binds those who play together, and also the musicians and their audience. This mutual conception of musical engagement widens the musical interaction to concern the social context.

2.4 Musical interaction in social contexts

The study of musical interaction in its social context prompts pedagogical, historical, and philosophical questions of instrumental lessons as part of pedagogy in music education.

Furthermore, the realm of instrumental music teaching and learning seems to be intertwined in twofold musical interactions. On the one hand, musical interaction relates to the musical material and to the process of producing it, and, on the other hand, musical interaction takes place between two or more persons, between musicians playing together, and between musicians and audiences.

As a contrast to the individualistic notion of a performer, a public performance may provide a musician and audience with a unique opportunity for reunion that fulfills the ultimate purpose of music making. According to Davidson (1997, 215), “the social facilitation of musicians recounts of inspiring and as positive experience with regard to public performance.” Davidson explains that the cognitive appraisal of co-performers or audiences can have direct effects on levels of physiological arousal. Increased heart-rate, with associated increase in oxygen supplies and sharpening of the visual system can all enhance musical performance, as breathing and attention are heightened. This phenomenon is often referred to as optimal arousal. However, when the appraisal is negative, arousal levels can increase so dramatically that palpitations, body tremors, breathlessness, visual disturbances, and sweatiness result, which can severely impair performance (Davidson 1997). In other words, the social meaningfulness of musical expression and social awareness or sometimes social pressures of performing, construct the expectations or tensions that in fact are what counts in such occasions.

Although the description above dealt explicitly with performance contexts, it is equally possible to see how social facilitation will operate in instrumental music lessons (Heikinheimo 2003). Davidson (1997, 214) states that teachers are not the only people with whom the learner interacts. “Parents, siblings, peers, professional performers all contribute in significant ways to motivating practice, learning, and general engagement in musical activity.” Therefore, it appears that musical learning is a collaborative, social achievement between the learners and the key others. Alongside the socio-cultural factors, the factors related to direct human interaction shape the processes and behaviours, brought to the performance context.

Practices and artefacts from traditional cultures were, in their original contexts, enhancements of everyday life. Music originated in these and alongside the musical education was naturally part of these communities of practice. Dance, pantomime, music, and

architecture were, as Scruton (1997, 438) argues, “originally connected with religious rites, not with theatres and museums”. In the time of, for example, renaissance and baroque in Europe, the various arts consummated the meaning of the community. Furthermore, the composers were as aware as performers of the fact that music is part of, and develops with, the rest of social life. Scruton (1997, 445) gives examples like *Bach’s ‘French’ and ‘Italian’ suites*, or *‘Italian concerto’*. These examples refer to the social context of the composition. Davidson (1997) points out that as a consequence of the musical elaborations by the composers and musicians, the practices, specific ensembles and musical forms have become parts of the cultural expectation of what constitutes each musical style. Similarly, the lessons examined in this study evolve within the context of Western art music.

It seems that instrumental teachers and the students, who act in the classical music tradition, are constantly preparing for the next performance or the coming examination. The evaluation and elaboration of musical skills, musicianship or musical performing, as a social culture, do influence their everyday life, which can be considered the everyday life of master-novice culture. As stated above, the master-pupil setting and tradition has been dominating the culture of the social context of instrumental music teaching and learning. Historically, the traditional model was to recruit newcomers to professions by means of apprenticeship (Wenger 1998). This description refers to the apprenticeship-like relation between the student and a distinguished performer of the instrument. As an educational model, apprenticeship is recognized by learning through participation in a community of practice, gradually moving from a legitimate peripheral participation to becoming a full member of the profession under the guidance of "masters" of the discipline (Lave & Wenger 1991; Nielsen & Kvale, 2000).

Apparently, the masters, instrumental music teachers, have during the 200 years time been in connection to surrounding community also other than their own domain. As an example of socio-cultural connection to instrumental lessons, the surrounding philosophical thinking, as Louhivuori (1998, 289) argues, has had “a strong connection with violin lessons at all times”. Louhivuori pointed out in her thesis, how the aesthetical thinking, especially when it comes to questions concerning musical taste, style and ideas of the value of music seem to have been reflected in a significant way in, for example, violin pedagogy. Aesthetic ideas seemed to merge with the instrumental teaching philosophy and with the lessons during that time and up to our time. She studied fourteen “most significant violin schools” from Geminiani (1751) to

Galamian (1966) and Szende (1977). Many of the authors of the violin schools were in close interaction with famous music philosophers such as Sulzer with L.Mozart, Rousseau with L'Abbe, Fetis and Thibaut with Baillot, Spencer with Joachim, and Schopenhauer with Auer. The extensive period of time of the violin schools can be considered as the settlement of the conservatoire tradition starting from private schools in Italy, Padova 1728, and France, Paris 1780, and after a break, through influence of the revolution, the communal conservatoire in 1796 was founded (Louhivuori 1998).

In the conservatoire tradition, instrumental one-to-one tuition has been a major approach for achieving a musician's identity (Hargreaves, Marshall, & North, 2003). Characteristically, the conservatoire tradition has respected and defended the written score of music and the composer. The composers and performers originate from a cultural environment, which embraces, feeds, assesses, elaborates and empowers musical talents. These musicians merge their energy, lifestyle, material and ideas for their work and personality in the culture. These targets and goals in musical educational life are both important and dominant, because the frequency and social meaning of the performances and examinations take effect in the personal and collaborative activity of practising and rehearsing (Jørgensen 2002). Due to the goal-orientation and process of preparation which both the student and the teacher live through, the practicing and the lessons can be quite emotionally loaded.

The tradition of classical identity seems to be stronger than the musical or practical needs. For example, in a Swedish study of music education in schools in the 1970's (Olsson 1997), new genres such as rock, jazz, and folk music, were introduced into the curriculum. According to the research, the teachers responded in their interviews that their own teacher training was based on the classical repertoire, which had given them a strong identity as musicians. Therefore, the participants in the project based their work within the new genres on the same criteria of aesthetic value as classical music. Olsson (1997) found that the power of institutional practice and individual student identity effectively can rule out methods of tuition which may be much more appropriate for certain genres and styles of performance: "pre-existing traditions may be a stronger influence on educational practice than the curriculum itself" (Olsson1997, 301).

This internal contradiction of musical education between traditional practices and ideas in the curriculum may be problematic when facing new social challenges in music. Gaunt (2006) notes that

versatility is now a professional necessity for many musicians who pursue a portfolio career, exploring new skills besides performing, and become involved in developing new vocabularies such as sound worlds, extended techniques, electronics (Gaunt 2006, 63).

In this perspective, music teachers need to explore new ways of working broadening out from the concert hall, collaborations with musicians from other cultures and disciplines, artists, dances, actors, and ways of working in educational contexts.

The social context of musical interaction therefore offers an important approach to instrumental music lessons in developing them towards the expected professional challenges. The concept of mutual learning (Gaunt 2006) has provided an answer to the potential within instrumental and vocal tuition of a collaborative learning and research environment, encompassing both teachers and students in similar enterprises based in professional contexts. Gaunt (2006) found this to be an environment in which the teacher could legitimately develop on his or her own terms, not simply through nurturing a student nor basking in the reflected glory of their success.

Consequently, the social context in which teachers and students work, as this section has described, obviously influences the dynamic character of instrumental lessons. Therefore, Intensity of Interaction is not an isolated description of instrumental music making as such. Rather it resonates with the social-cultural environment, in which the teachers and students are involved.

2.5 The instrumental lesson as dialogue

Drawing on the socio-cultural approach (Vygotsky 1978), this study argues that culture is formed by and formative of human thought and action, and inseparable from human development (Barrett 2005). Consequently, this study views the instrumental music lesson dialogue, in Barrett's (2005, 263) words, as "a cultural practice that provides a powerful means of communicating human thought and feeling." In other words, dialogue in instrumental lessons provides an option for creative musical and pedagogical engagement. This engagement includes reflection. Gaunt (2006) emphasises the balance and

interrelationships between different types of reflection in instrumental lessons for adopting the style of learning patterns.

To reach amicable agreements or settlements in pedagogical, musical or instrument specific conventions is not the only option. When the musical and pedagogical problem solving of the lesson is also open for contradictory or different choices, even for those that challenge teacher authority, the interaction can be inspiring and quite delicate, as well. In managing different opinions and options it is difficult for the participating teachers and students to avoid arguments or statements with attributes or matters affected by personality and temperament (Madsen and Duke 1987, 1993; Dunderfelt 1999; J. Sloboda 2000; Keltikangas-Järvinen 2006).

Rather than concentrating on personality attributes, this study takes as its starting point that the major factor formulating the interaction is the object of the lesson. For example, according to lesson observations at the Sibelius Academy, goals and aims of the action directed the teacher-student communication. Goal oriented activity arose within the teacher-student work, and from the outside influences, and directed the use of time and space in the lessons Marjukka Kuusela (2002) explored. She concludes that professionalism, focusing on the musical and pedagogical problem solving, characterized the teacher-student interaction (see also, Gaunt 2008). This could be “seen, heard and sensed at every level of communication” in her study (Kuusela 2002, 93).

Achievement of goals is typically the central theme in instrumental lessons. The aim of the work is the preparation for future challenges. Following Dewey’s pragmatism, thinking in general is understood as anticipation of action. This means that through thinking humans anticipate actions, while meanings are tools of this anticipation. Määttänen (2009) explains that meanings connected to the starting points of action enable anticipation of the consequences of action, while meanings connected to the outcome of action remind of the means in achieving the goals of action. Therefore, the need to anticipate the course of future development, for example, in instrumental lessons, arises also from social and pragmatic realities. Anticipation in developing a skill from social-cultural perspective means a functional loan by social others and by culture, and its active reception by the subject in this cultural sense.

In an instrumental lesson the teachers and students anticipate in the interaction, communication, sharing, and joint activity. The point is that, on the one hand, the biological and physiological aspects, reactions and actions, have to be taken for granted in an educational activity. On the other hand, the teacher, the student, and, for example, the parents can anticipate by changing the teaching and learning strategies, environment, timing, space, decoration, musical and pedagogical content, and means of communication (see e.g. Hargreaves & North 1997; Hallam 1998; Duke 1999; Rostvall and West 2001; Tuovila 2003; Calissendorff 2005; Swanwick 2008; Hultberg 2008; Karlsson and Juslin 2008).

Generally, communication means the imparting or interchange of thoughts, opinions, or information by speech, writing, or signs. More specifically, this study draws on a sociocultural approach to communication, by referring to “contextualized practice”, concerned with “producing and constructing meanings”,⁸ and more specifically, “a practice which always takes place under specific social, cultural, and political conditions” (Barrett 2005, 264). Furthermore, the context of instrumental lessons includes musical communication along with verbal and non-verbal communication. For Y. Engeström (1987) communication and production are inseparable. An activity system, the context, incorporates both “the object-oriented productive aspect and the person-oriented communicative aspect of the human conduct” (Barrett 2005, 264). Viewing the instrumental lesson as an “activity system” integrates the subject, the object, and the instruments (material tools as well as signs and symbols) into a unified whole. Barrett states that “intellectual activity is ‘distributed’ amongst persons, activities, artefacts, and settings” (Barrett 2005, 264). The discussion on communication as an activity will continue in detail later in the following chapters.

In sum, this study maintains that dialogue as a socially, culturally and historically emerged activity of the instrumental lesson is at the centre of a meaningful musical learning. Musical meanings arise in the lesson dialogue, which is consequently a joint activity. This musical activity of teaching and learning is intensified by constructed meanings in meaningful contexts. As an outcome, motivation and learning emerge within the surrounding cultural life

⁸ Referring to the process of combining ideas into a congruous object of thought, musical and pedagogical meanings, a preference for use of meaning construction in stead of meaning production will be evident in this study. Musical and pedagogical meaning construction can be seen to emphasize creativity as regards a group of words, signs, verbal and non-verbal signals that form a constituent of a sentence, topic or theme and are considered as a single unit (see chapter 7). Production can be attached more to creating, making, or engendering musical elements, for example, sound, rhythm, harmony, dynamics, or instrumental technique, or a concert.

and activities, which provide the environment for musical learning, and create the major dimension for meaningful instrumental activity.

2.6 Aim and research questions

The aim of this study is to understand the dynamic character of teacher-student work and some of the mechanisms of musical and pedagogical meaning construction in instrumental lessons. To fulfil this aim, the study addresses Intensity of Interaction by examining how teachers and students preserve and alter Intensity of Interaction in their music lessons. In other words, this study aims to understand how teachers and students create, facilitate and support musical and pedagogical meaning construction. The overarching research question is:

How does Intensity of Interaction constitute musical and pedagogical meaning construction in instrumental or vocal teaching and learning and to which features of verbal and musical communication is Intensity of Interaction connected?

As this introduction has described, the instrumental lesson is a multilayered and complex object of research. Because of this complexity, the main research question incorporates specific sub-questions, which aim to encapsulate and guide the investigation. In order to examine the dynamic character of the multifaceted teacher-student work and analyze their meaning construction, this study turns to various and intertwined methods of gathering information. As a methodological starting point, this study is not only an observational study. An observational study would provide information on the interaction, which is descriptive but insufficient for understanding the sense making and emotions of the participants. Therefore, the sub-questions concentrate on creating and elaborating methods tailored for the data collection and analyses necessary in this study.

- (a) How do the teachers and students produce and perceive intensity during the lessons?
- (b) How can musical and pedagogical communication be analyzed?
- (c) How do the teachers and students construct meanings in lesson communication?

- (d) How are the perceived and analyzed features of communication in musical and pedagogical problem solving connected?

The empirical challenge of collecting detailed descriptions of perceptions, in order to answer the sub-question (a), prompts practical questions concerning the method: What could serve as a data collection strategy that is simple and accurate enough for gathering perceptions concerning the teacher-student interaction? How do the findings of this data collection describe the musical and pedagogical interaction? Chapter 6 reports the functioning and outcomes of the method elaborated in this study (intensity ratings used within the stimulated recall interviews).

The second and third sub-questions (b) and (c), ask how to deal with the gathered information. To explore the musical and pedagogical meaning construction, this study adapts and develops previous methods of communication analysis. In particular, this analysis considers how to structure the transcript of the recorded lessons. What units of analysis most meaningfully serve the purpose of this study? How are we to articulate, illustrate, and compact the musical and pedagogical communication under examination? Chapters 7 and 8 present the results of the adaptation and elaboration of the method, which provides grounds for analyzing the elements and mechanism of the interactive teacher-student work.

As an answer to the fourth sub-question (d), Chapter 9 consummates the findings of the analysis. Consequently, the research questions aim to answer how teachers and students transfer or mediate meanings in an instrumental lesson context. The aim of exploring the teacher-student work is to find a means of description with features of overview and depth at the same time. The forementioned research questions focus on the instrumentality and character of Intensity of Interaction. The ontology and meaning of the term intensity, more closely Intensity of Interaction, lies in its practical implications within the musical and pedagogical context, since, from a pragmatist point of view, the use of a term demonstrates its meaning and value (e.g. Dewey 1916; Määttänen, 2005). In other words, the research methods of this study are found within the framework of pragmatist theory and Activity Theory. These theories structure the discussion on the theoretical background and research methods in the next two chapters.

Chapter 3

Theoretical framework

In order to theoretically frame and conceptualize the instrumental music lesson as a teaching and learning activity, the present study draws on pragmatist philosophy and cultural-historical Activity Theory.⁹ These two lines of thinking share some essential features and methodological applications. Their principles are to a certain extent combined in this study. By pragmatism this study refers to the emphases John Dewey made in his philosophy. Dewey's writings have been central in the development of the praxial music education philosophy (e.g. Alpersen 1991; Elliott 1995; Westerlund 2002; Regelski 2005; Väkevä 2006). The combination of praxial and aesthetic views (Westerlund 2002), offer grounds for the crucial concepts concerning music and music education which this study develops further as a tool for understanding interaction in instrumental lessons.

In the field of music education, concepts and theories within the framework of Activity Theory are relatively new (Hargreaves 2008), although researchers such as Welch (2007), Johansson (2008), Burnard & Younker (2008), have used Activity Theory for investigating the practice of music education and performance. Similarly to this study, Welch (2007) emphasized that there is much that can be gained by exploring Activity Theory's key principles: the activity system as a unit of analysis, multi-voicedness, historicity, contradictions, and expansive cycles. Basically, Activity Theory seeks to answer the question of 'what is human activity?' by dismantling its complex mechanisms. The paradigm, known as cultural-historical Activity Theory (CHAT), has developed through cultural-historical psychology, which is a method of studying thought and consciousness. Activity Theory is based on Vygotsky's et al. analyses of artifact mediated action, and a synthesis of Leontiev's

⁹ In this document I will use either Activity Theory or the abbreviation AT to refer to cultural-historical activity theory

general activity theory. Consequently, Activity Theory offers practical solutions in developing and analyzing methods for exploring the multifaceted and complex activity of the instrumental lesson.

3.1 Focus on practice

In viewing concepts like activity and practice, pragmatist philosophy and Activity Theory share, according to Miettinen (2008), the perspective towards psychological phenomena related to cognition, thinking, and values. Even emotions are functions of practical activities, which connect to practical turns, intertwining inseparably to each other in action.

The differences between pragmatist and Activity Theory relevant for this study concern the conception of activity. Miettinen (2008) outlines that in pragmatism, activity is perceived as interaction of humans with the social-cultural environment and material. These two are inseparable and their unison is viewed as an event of activity. From the Activity Theory perspective, an emphasis on unison is problematic, if instrumentalisation of the knowledge as common artifacts is not taken into account. In pragmatism, the intermediate nature of an experience is based on the interactive relationship between the subject and the environment (Määttänen 2009). Miettinen explains that for Dewey the instruments in changing the environment are only one element of the event. Whereas, Vygotsky's concept of mediation emphasizes the methodological meaning of the tools of an activity in particular. This means that remediation, developing tools, is central in the process of problem solving. Crucial in solving problems are shared notions concerning the reasons for the problems as well as the tools that enable problem solving.

Indispensable starting points, theoretical framework and research methods for this study are informed by the notions of instrumental action, means-end examination, and use-value of doings associated with pragmatist philosophy (Westerlund 2002, 2008; Määttänen 2005; Väkevä 2006), as well as the closely-related concept of mediated action through cultural tools within cultural-historical Activity Theory. Both perspectives offered an alternative to the stimulus-response models of behaviorism and the dualism of mind and material world. In contrast, pragmatist and Activity Theory perspectives have argued that a subject's relationship with the objective world is always mediated by activity. People do not passively absorb and

react to stimuli from the outer world. Rather they actively explore and transform their material and social environments.

Both the pragmatism of the Chicago school (Dewey) and Activity Theory (Leontiev, Vygotsky, Engeström, Y.) focus on the concept of practice by observing and examining the relationship between personal actions and collective division of work (Miettinen 2008). In an active process, people produce and reproduce culture and consciousness through mediated actions. Applying Dewey's idea to musical learning, Westerlund (2002, 48) states that "through this mutual relationship between doings and undergoings we develop musical agency and expertise within a practice". For Dewey (1934, 50) "doing and undergoing, outgoing and incoming energy, that makes an experience to be an experience" have a reciprocal, cumulative, and continuously instrumental relationship. "Craftsmanship to be artistic in final sense must be 'loving'; it must be deeply for the subject matter upon which skill is exercised" (Dewey 1934, 49). Dewey's emphasis on values in artistic activity is relevant also for this study. Further on, this study maintains that the experiencing and promoting values of teaching and learning in instrumental music lessons are connected to Intensity of Interaction.

In defining value, this study argues that values are not only connected to cultivation in making music and cultivation of the pedagogical process. Significantly, quality in interaction of instrumental lessons means communication based on passion for music with control of mediating tools. The combination of control and enjoyment (see Schenk 2000) within the musical and pedagogical production has qualities that a spontaneous and uncontrolled activity does not have (see also Dewey 1934). In pragmatist view, an event such as an instrumental lesson gains value through meaningful actions (e.g. Miettinen 2008). At the individual level, instrumental lessons are usually characterized by strong goal orientation. External goals, particularly within the frame of Western music, are often based on curriculum, exams, and performances. If these goals are taken for granted, the contexts of exams or music performances could stay the same year after year, and the value of the teacher-student work may remain more or less internal.

In Activity Theory, meaningful context is an *object-oriented* activity (Engeström, Y. 1987). More specifically, context in Activity Theory, as Nardi (1996) explains, is not an outer container or shell inside which people behave in certain ways. Rather, people consciously and

deliberately generate contexts (activities) in part through their own *objects*; hence context is not just "out there". The crucial point is that in Activity Theory, the external and the internal are dialectically unified. Context is both internal to people, involving specific *objects* and goals, and, at the same time, external to people, involving artifacts, other people, and specific settings.

Quality refers in this study also to an experience. Basically, art as experience is a process of production that is at the same time intrinsically valuable as its processes are enjoyed and instrumental in its use of techniques and tools. Through their tool-using nature, artistic activity and related human efforts are ways of improving the quality of human life, to make it meaningful. From Dewey's pragmatist perspective, these intensified experiences are valuable to human life since valuation involves an aspect of use and estimated use-value (Dewey 1934). For Dewey, quality of experience is potentially present in life in general. However, it is particularly within the arts that human beings have developed channels to combine means and ends, to intensify experience and through doing so to attain positive experiences.

In instrumental music lessons, the music played, the skill developed by the musicians and the context of the music may gain both intrinsic and instrumental value depending on the changing pedagogical objectives. As Westerlund (2008) explains,

any musical piece or repertoire as such does not automatically bring the value to an educational situation. The structures of musical repertoires alone do not determine the quality of the learner's experience. (Westerlund 2008, 86)

In search for the criteria that make instrumental lessons meaningful and qualitatively good musical events, this study is interested in the perceptions of teachers and students. More importantly, the current study explores what kinds of events (lessons) the learners structure for themselves: What kinds of means and ends have the utmost potential for intensifying teacher and student experience within the limited timeframe of formal education? As an answer, Westerlund states that musical performance as an experience has

the potential value of involving liking and thinking as well as motor-effective acts, and that these are conditioned by all the factors that influence an individual learner's view of him or herself within a particular situation and context (Westerlund 2008, 88).

Consequently, it is in the interest of this study to recognize that music has direct use-value in the lives of students; in that sense instrumental lessons are consummatory experiences (Westerlund 2008; Määttänen 2009).

Thus, in the context of instrumental music lessons, the pragmatist means-ends instrumental value of musical engagements evolves in two ways. Firstly, music making has use value: what does playing as such mean to the player? Secondly, music making has exchange value: what does the player gain by playing well or by performing publicly? In addition music and the process of musical expression have aesthetic value referring to the personal experiences that are meaningful to the musician or listener (Määttänen 2005; Väkevä 2006; Westerlund 2008). These values are constantly intertwined in music education systems.

3.2 Balancing views of the aesthetic and praxis

The musical and pedagogical values of instrumental lessons emerge in the lesson interaction through practical choices: through teaching and learning strategies teachers and students actualize and mediate the purpose of a lesson. In search for what is musically and pedagogically valuable in instrumental teaching and learning this section views the question through two extremes of music education philosophy, the aesthetic and praxial views. The aesthetic idea by Reimer (1968, 1996) is that performance becomes “means to an end, a laboratory for providing aesthetic experiences” (Reimer 1968, 107). Aesthetic experience for Reimer is, according to Westerlund (2002), a subjectively felt understanding of the feeling that the musical *object* embodies so that the latter works as an *object* causative of its understanding. This subjectively-felt realm, according to Reimer, exists at its best in isolation from the intersubjective and participatory world of other subjectively feeling bodies. In his attack on Reimer’s idea of music as aesthetic education, Elliott (1995) sees the individual as a practitioner using rules and principles that are a common possession in his or her musical action. Music education becomes a question of artistry and craft, like gymnastics is a question of what athletes do. One has to learn how musicians work in order to understand music. In the perspective of this study, both views offer insight for understanding values in instrumental lessons. The teachers and students in instrumental lessons develop their musical expressions and musicianship through local situational interpretations that can have features from either aesthetic or praxial emphases, or their combination. For Westerlund (2002) the combination

of both perspectives is possible based on Dewey's idea that music is an experience. The quality of musical experience in education is dependent upon the qualities of the "musical *object*" or on success in musical actions (Westerlund 2002, 228), yet, also upon the interactions with fellow learners and the teacher. Based on these possible music pedagogical emphases, Chapter 4 develops further the concept of the musical *object* as a tool in understanding the lesson interaction.

In sum, this study assumes that there is a connection between an intensified aesthetic experience and Intensity of Interaction in instrumental lessons. In other words, the interaction in the lessons demonstrates and produces musical and pedagogical values. In order to grasp and understand how to explore such a complex value system, use value and exchange value of music making and instrumental pedagogy, this study has benefited from the comparison and connection between music education philosophy within pragmatism and the methods within Activity Theory.

3.3 Cultural-Historical Activity Theory in musical engagement

Both pragmatism and Activity Theory point out the organic undivided unison of the bodily present human and environment, and they both view an event in the context of its history. Miettinen (2008) agrees with this unison as long as both theories view problem solving in an event as a means-end instrumental value. More specifically, however, to draw a distinction with pragmatism, Activity Theory focuses on activity and the historically developing *object* of an activity (see also, Edwards 2007).

Activity Theory for its part is a complex, holistic, psychological paradigm that both encompasses and consists of Western psychological systems and approaches such as cybernetics and information-processing cognitive psychology (Nardi 1996). It has gained popularity as an approach that takes into account the cultural and organizational context and also directly focuses on day-to-day practical work, thus providing an alternative unifying approach. Activity Theory seeks to investigate and provide a set of basic principles, which entail a broader conceptual framework with which to understand the goal oriented, socially and culturally influenced practices of humans engaged in common activities such as, for example, playing music on instruments.

3.3.1 Semiotic and cultural mediation

The theory of cultural-historical activity evolved from the work of Vygotsky as he formulated a new method of studying thought and consciousness. The key to the understanding of psychological phenomena, in Vygotsky's view, was to study it in practice; to study the process of doing over the course of a particular action, as part of an individual's lifespan, within changing social and cultural milieu over historical time. According to Moran and John-Steiner (2003), Vygotsky considered nothing about the human mind's functioning to be static, neither within particular timescales nor across them. The basic understanding of this theory is that all human activities are mediated by culturally created signs or tools and that the internal mental state of the individual is transformed through external interactions with these signs (Vygotsky 1978).

Vygotsky considered the action as an effort diminishing the gap of uncertainty between the immediately perceptible *object* and the *object* mediated by tools and signs. This means that tools and signs are used as auxiliary means and are mutually linked in actions. Tools represent concrete working instruments such as a bow producing sound on a stringed instrument. Signs refer to psychological instruments such as remembering, comparing something or learning a bow technique for the particular sound production. "Both technical tools and psychological tools mediate activity and imply reflections. But reflective mediation is part of and an attribute of psychological tools" (Engeström, Y.1987, 60).

A fundamental principle of AT, similar to pragmatism, is the unity of consciousness and activity. According to Miettinen (2008), the search for the origin of consciousness was central to Vygotsky. While Piaget interpreted the egocentric talk of the child as a transfer from autism to social interaction, Vygotsky's (1981) interpretation was controversial. The development of children's consciousness, according to Vygotsky's research, is based on "sociogenetic law", which states that the thinking of a child develops through interpsychological, shared actions with the mother and the child, and followed by the intrapsychological, or inner talk of the child (Moran & John-Steiner 2003).

In instrumental music lessons, this means that the joint work by a teacher and student (for example, actions, attempts, and discussions on musical cultivation on better sound quality) is followed by the student's individual work with inner talk, which refers to what she experienced in the lesson concerning actions for better sound production. The sound

production as inner talk is individually constructed, historically cumulative and selective, which means that the student gathers information, body-movements and the like during the past lessons and other musical engagements.

This concept of internalization also presumes the opposite mechanism, the process of externalization. Externalization means that thinking and action are objectified in cultural artifacts, for example, in the realization of a technique in a performance, in the next lesson, or in a concert. Each lesson, performance, or situation with feedback reinforces or weakens certain actions, the personal inner talk about, for example, details of the sound production. Basically, this circle of internalization and externalization demonstrates that while humans solve problems of their common activities they take part in developing common tools or artifacts. This process of problem solving also changes the participants (Miettinen 2008, 215). For Vygotsky (1978), the core in learning was in finding or creating new tools for the problem solving within activities, namely *retooling*.

The model of mediated action points to how meanings are constructed by humans in interplay with culture and society, and is grounded in Marx's theories on praxis as the human ability to use tools (e.g. Engeström, Y. 1987). The cultural-historical school, stemming from Marx, explained inner psychological development as originating in outer stimulance, and as depending on peer guidance and participation in collective surroundings that are more advanced than the individual. This insertion of cultural artifacts into human actions was revolutionary in that the basic unit of analysis now overcame the split between the Cartesian individual and the untouchable societal structure (see also, Westerlund 2002). The individual could no longer be understood without his or her cultural means; and society could no longer be understood without the agency of individuals who use and produce artifacts. This meant that *objects* ceased to be just raw material for the formation of the subject. *Objects* became cultural entities and the *object-orientedness* became the key to understanding human psyche.

3.3.2 The structure of human activity

Based on Vygotsky's work on tools and signs, Leontiev (1981) addressed the issue of how historically evolving division of labor has brought about the crucial differentiation between individual action and collective activity. The further developments of Activity Theory are therefore characterized by directing attention to activity and action as different phenomena in

constructing the understanding of human conduct (Engeström, R. 1999b). Leontiev outlined a hierarchical structure with three distinct levels, which describe the relationships between collective and individual: the activity level, the action level and the operation level of human functioning.

Conceptually, although individual actions produce activity, the activity is always a system of its own. An activity has its internal transmissions, development and history. It is historically and concretely directed towards a certain *object*, which motivates individuals to act. The individual actions are directed by goals, and each goal ceases to exist when the action is accomplished. Compared with the goal of an action, the motive of an activity, as a socially constructed perspective, lasts for a longer time. Operations bear certain typified features, routines of actions when they accomplish the possibilities of the activity. Leontiev (1978) explains that activities are realized through motor and mental actions, which are directed by conscious goals (see Figure 3.1). Actions themselves are constituted through specific operations, the nature of which are dependent on conditions in the (external and internal) environment of the subject.

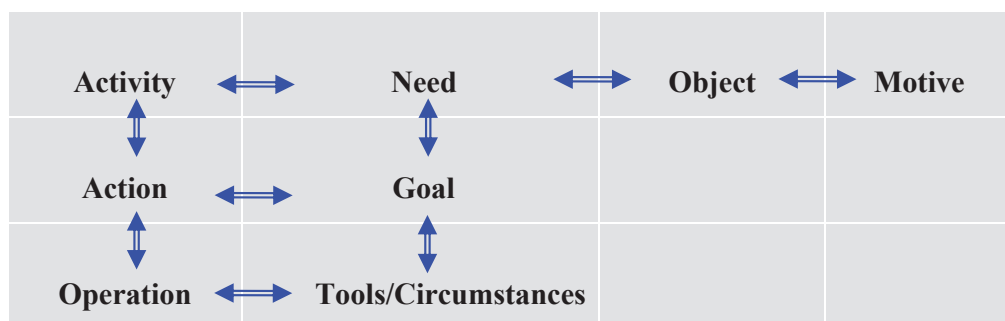


Figure 3.1: Three levels of activity (Engeström, Y. 1987)

The levels of activity are interrelated and therefore the structure is not a rigid one but allows transitions between levels. In moving both up and down in the Figure 3.1, operations can also over time become conscious actions. Additionally, the line between action and activity is moving as social conditions or contexts change.

Adapting Leontiev's theory to musical engagement means that musical activity as the *object* of teaching and learning deals with, for example, the collective *object* of certain kinds

of musicianship, which in its turn is built by goal oriented actions. Actions are needed for maintaining activity. An action proceeds through operations, which are the “automatic”, routinely performed elements the musicians have internalized and externalized. Plenty of operations carry out the achievement of a goal, like a pure sound, or dynamic variation. The musician controls the intonation, sound quality, position changes, and movements while he or she is practicing or performing. These actions may develop into an activity, when the motive, for example, building a certain kind of musicianship, of the actions has become their *object* (Leontiev 1981; Engeström, Y. 1987).

For example, learning how to play in the best possible way, or enjoying music, are typical motives for a young practicing musician (e.g. Gaunt 2006). This action, practicing, becomes an activity of studying music or carrying on the art of playing a musical instrument, when learning how to play becomes, along with being a motive, a collective historically developing *object* of producing abilities for musicianship by working systematically (Nielsen 2004). In other words, an activity is accomplished through actions, but the same action may serve different activities. Moreover, one motive may obviously find expression in various goals and actions; one and the same action may accomplish various activities and may transfer from one activity to another.

Conversely, an activity can develop into actions. A symphony orchestra with a unanimous emphasis on high quality sound production as a collective historically and culturally developing *object* encourages its individual players to carefully prepare their parts. These actions constitute an example that demonstrates the development from activity to actions as a consequence of the division of labor. The collective historical and cultural activity seems to control and direct the individual, instead of the individual controlling the activity. Correspondingly, actions are not special 'units' that are included in the structure of activity. “Human activity does not exist except in the form of action or a chain of actions” (Leontiev 1978, 64.).

According to Y. Engeström (1987), activities are realized by goal-directed actions, that subordinate to conscious purposes. These purposes are the typical *objects* of the cognitive psychology of skills and performances, whether they are motor or mental. As Engeström, Y. points out, human practice is not just a series or a sum of actions; in other words, "activity is a molar, not an additive unit" (Leontiev 1978, 50).

3.3.3 The model of activity system

In his development of Leontiev's theory on activity, Yrjö Engeström (1987) reorganized the whole structure of activity as a construction of related and interdependent triangles. The model depicted in Figure 3.2 is a logical continuation of Vygotsky's artifact-mediated and Leontiev's collective activity. What used to be adaptive activity is transformed into consumption and subordinated to the three dominant aspects of human activity—production, distribution and exchange (or communication).

The questions of value, use value and exchange value in musical engagement can now be articulated with the activity system model. Figure 3.2 illustrates the value production subdivided in by-triangles like production and consumption, exchange and distribution within the model. Engeström, Y. (1987) points out that the model suggests the possibility of analyzing a multitude of relations within the triangular structure of activity. However, the essential task, as he remarked with the introduction of the model of the activity system, is “always to grasp the systemic whole, not just separate connections” (Engeström, Y. 1987, 63).

The systemic whole of the activity system, particularly in terms of value, is dependent on the shared *object* and the aimed outcome, the purpose of the activity. In music education, the purpose of a lesson activity can be traced by questions of why and for what reason one either plays or listens to music, or whatever particular music makes sense to the participants. The teachers and students make sense by focusing on, for example, developing expression, competence, conventions, and contexts within and for musical performance. In this process of musical and pedagogical problem solving, their activity is, therefore, object-oriented and object-related. In other words, the identification of an object is always the crucial starting point in analyzing and examining any activity (see Engeström, Y.1987).

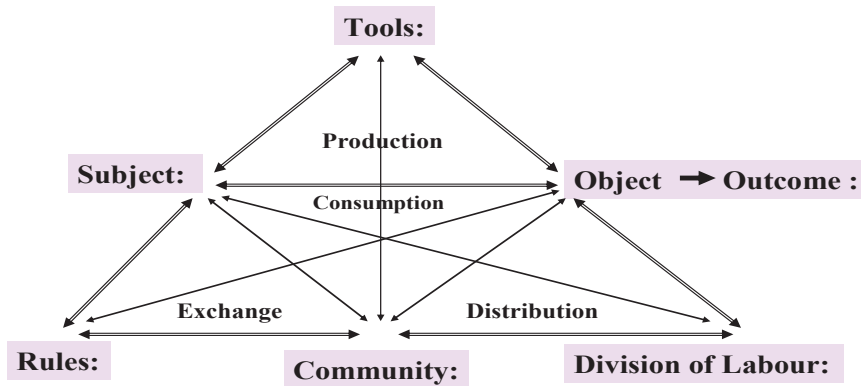


Figure 3.2: The structure of human activity (Engeström, Y. 1987, 78; 1995, 47)

Activity is depicted by a model of an activity system, which is a historically changing constellation oriented towards the *object* of the activity. In the model developed by Y. Engeström, the *subject* refers to the individual or group whose point of view is taken in the analysis of the activity. The *object* is the motive of the activity within the system. *Tools* refer to internal or external mediating artifacts by which the *outcomes* are achieved. The *community* is comprised of one or more people who share the object with the *subject*. *Rules* regulate actions and interactions within the activity system. The *division of labor* means that the tasks are divided horizontally between community members as well as referring to any vertical division of power and status. Transforming the *object* into an *outcome* motivates the existence of an activity.

In Engeström's model, a change in any corner of the sub-triangles produces changes inside the activity system, so the activity is in constant movement, riddled with internal tensions. Disturbances, the daily mundane problems, are highlighted in the research and investigated as indicators of deeper underlying tensions, called contradictions (Ilyenkov 1977) within and between activity systems. Cultural-historical activity theory looks at artifacts and people as embedded in dynamic activity systems. Based on the model of an activity system Engeström, Y. (2005, 63-65) summarizes the five principles in studying activities as follows:

1. The unit of analysis is a collective, artefact-mediated and *object*-oriented activity system, seen in its network relations to other activity systems.
2. The activity system is characterized by a multitude of voices and incorporates a number of different views, backgrounds and traditions among the participants. This causes conflicts and problems as well as motives for innovation and development.
3. An important part of every activity system is its history, partly its local history and partly the general historical background concerning dominating theories and ideas.
4. Contradictions - not the same thing as problems - constitute the driving force for change of activity systems, and are described as historically accumulating structural tensions within and between activity systems.
5. Activity systems may go through qualitative change and expansion, through cycles of expansive transformation. These may lead to the formation of an extended scope of possibilities in new versions of the activity system, and are understood as a collective journey through the zone of proximal development of the activity¹⁰.

The fifth point above describes processes of what Y. Engeström (1987; 2005) defines as *learning by expanding* or *expansive learning*, whereby the activity system is studied as a learning and creative unit. Expansive learning often coincides with a re-formulation of the *object*, which is then connected to a transformation of the entire system. Y. Engeström depicts this expansive learning as a cycle, which is manifested through specific epistemic or learning actions that illustrate a process known as “ascending from the abstract to the concrete” (Engeström, Y. 1995, 100). The “concrete” outcome of an expanding process is often a new concept. At the core of the new concrete form of activity is the finding and modeling of the disturbances and contradictions. These actions form an expansive cycle or spiral. Typical actions are described as a seven-step process: questioning, analyzing, modeling, examining the model, implementing the model, reflecting on the process, and consolidating the new practice.

In order to facilitate steps of development for the work of teachers and students, this study aims to articulate and analyze the systemic whole and the separate connections within an activity system of instrumental lessons. The following section discusses and specifies the work of the instrumental music teachers and their students by using the model of the activity system (Figure.3.2).

¹⁰ See definition and discussion in section 3.2.4

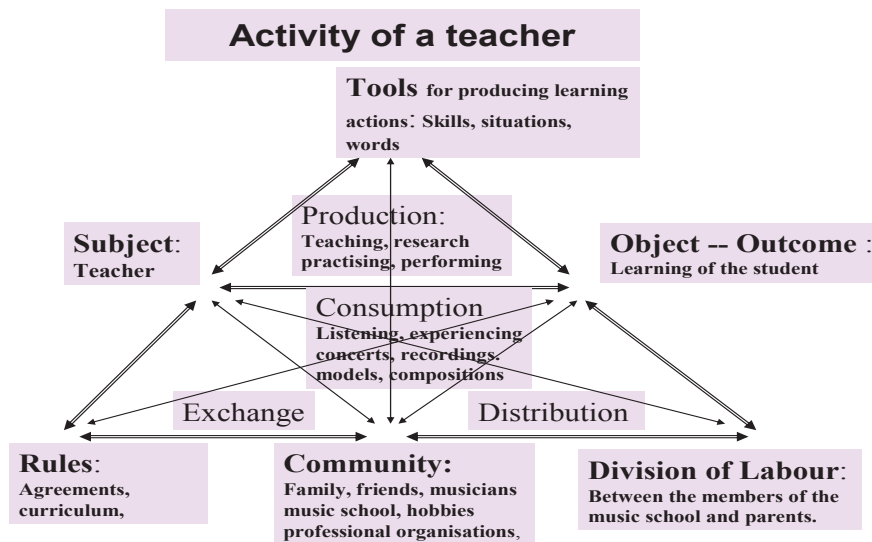


Figure 3.3: Activity system of a music teacher

The model in Figure 3.3 provides an instrument for communal thinking from music teacher (subject) perspective. How do the teachers produce musical performances and promote musical understanding or learning within musical engagement¹¹ (outcome)? They produce or discuss, for example, sound or phrasing (*object*) by using musical elements, technical ideas and exercises or images (instrument or tool). The tools, originating in the music pedagogy, carry on the tradition of each specific domain, instrument, genre, and principles of the national curriculum. The teachers in instrumental lessons work on quite a number of technical and musical targets. These exhausting lists of targets seem to guide the actions in lessons. According to Colprit (2003), who studied targets articulated by Suzuki string teachers, and Zhukov (2004), who studied instrumental teaching in Australia, the targets invoke the type of teacher verbalization. Their studies, among others (see Chapter 2) were interested in how the teachers choose targets, and how they communicate ideas and directives to students. Students' reflections or initiative did not have a place in these studies. The studies concentrated therefore on targets that remained teacher-led and were dependent on teachers' ideas. Similarly, Gaunt (2006, 281) in her study formulates that "student

¹¹ Musical engagement consists of listening to music and producing musical expression by playing, singing, conducting, composing (see e.g. Elliott 1995, Custodero 2002).

engagement was assumed rather than shown”: the targets were not, at the starting point, common *objects* of meaning construction within the lessons.

If we think of a student (or students) as the subject of his or her (their) musical engagement (Figure 3.4), the initial *object* would be a musical idea, a challenging passage in music or an assignment by the teacher that triggers the musical process with the *object* of refined musicianship. The initial *object* is necessarily ambiguous, requiring interpretation and conceptualization. Thus, the *object* is step-by-step invested with personal sense and cultural meaning. The *object* goes through multiple transformations until it stabilizes as a finished outcome, for example a refined, well practiced and justifiable musical expression or even a public performance.

The *object* is both something given and something anticipated, projected, transformed, and achieved. In the transformation of the object, also the tools, or the mediating artifacts, are transformed. (Engeström, Y. 1990, 18).

This process is only possible by means of mediating artifacts, both material tools and signs. The student musicians may use pencil and paper, do recordings or videos, receive and discuss models, suggestions and comments from and with the teacher, along with internalized images and concepts that seem relevant for the rehearsing of the *object*. The process alters, and sometimes even generates entirely new mediating artifacts.

The bottom sections of Figure 3.3 and Figure 3.4 call attention to the work community in which the teacher or student is a member. The subject belongs to an institute or to a musical instrument domain (community) with certain written or unwritten regulations that guide his or her work (rules). The work of teaching offers roles for both subjects. Within the community, the members continuously negotiate their division of labor, including the distribution of rewards. The temporal rhythms of work, uses of resources, and codes of conduct are also continuously constructed and contested in the form of explicit and implicit rules.

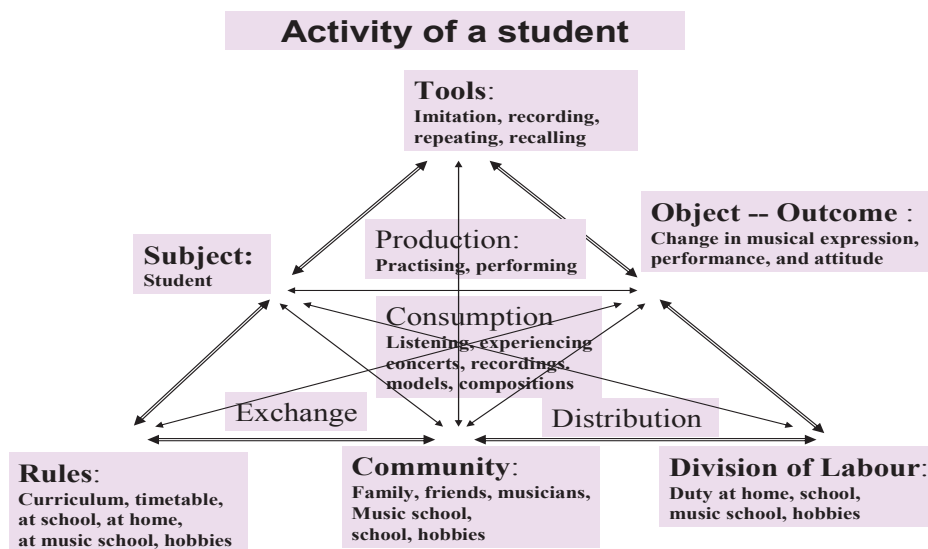


Figure 3.4: Activity system of a music student

In this study, an *object of the lesson* comes out of practices in interaction, and includes the subjective perspectives of both the student and the teacher. The point here is to distinguish between targets as proximal goals of teacher-student actions and *objects* of the lesson activity. The identification of an *object* in music instrumental lessons is crucial in distinguishing the meaning construction of both teacher and student. An *object* of an activity, according to Leontiev (1978), is its true motive. The musical meanings and problem solving of the lessons examined in this study constructs, from the viewpoint of Activity Theory, an activity, which is collaborative, local, situational and therefore unique. The special character of each lesson arises from within the activity systems of the teacher and student. They both represent their cultural-historical background with earlier musical, pedagogical and personal experiences with their personal goal-orientation.

When asking, what is an *object* in music pedagogical problem solving or what does an *object* in the instrumental lesson mean, one has to assume that an instrumental lesson activity, equates to activities of other lessons. This assumption is based on the presumption that instrumental lesson activity carries on, as stated earlier, cultural-historical reference to the tradition of institutions, instrumental pedagogy, and genres of music. Previous studies support

the premise that the core activities in instrumental lessons are after all alike (e.g. Rostvall & West 2001; Duke & Simmons 2006; Gaunt 2006). Duke and Simmons (2006) found 19 elements, which consistently presented themselves in the work of three teachers who teach in different performance domains – winds, strings, and keyboard – all of which pose different technical and pedagogical challenges. Despite the variation of personalities, professional backgrounds and experiences their teaching was “strikingly similar” (Duke & Simmons 1999, 16). There is certainly diversity in how instrumental lessons are taught, however this study focuses on what features of content and communication are common. As an answer to the questions concerning meaning construction and communication in instrumental lessons (see Section 2.6), this study aims to find general definitions for the *object* of an instrumental lesson activity.

Articulating the *object* of an instrumental lesson activity is, however, challenging, because the meanings of the corners (*tools*, *subject*, and *object*) in the production triangle may shift constantly. For example, in the activity of instrumental learning producing musical expression in a concert as an outcome may shift to being a tool of learning musicianship. Moreover, the musical product and process are fused. Custodero’s (2002b) view of music making emphasizes the “fusion of the product and process” – means-ends. She describes that

when listening to music, we must actively focus our attention while simultaneously constructing meaning from the musical cues, taking delight in a single moment where the rhythmic, harmonic, or formal context has given a single sound a sense of the extraordinary. When performing, we must also move fingers of vocal chords as we attend to sound: this requisite physical involvement contributes to the sensory rewards of the creative moment. (Custodero 2002b, 5)

The process of music making, as a teaching and learning activity of instrumental music lessons, can be considered *object*-oriented, because both the teacher and the student aim for change; the change in aesthetic or qualitative thinking of musical production, practicing, performing and in creating musical knowledge and know how with necessary skills. In Activity Theory, activity and change are connected. As discussed in Chapter 2, the *object* might be the achievement of broader personal and cultural aims like an understanding of the moral and spiritual role of music, character development of pupils, or a virtuous and joyful life (Hargreaves, Marshall & North 2003).

In addition, the *object* of a lesson is connected to the outcome of the musical activity. The outcome may end up being ideals such as a good relationship with music and with other musicians, musical and personal growth with development as part of music education (Elliott 1995; Westerlund 2002; Hargreaves, Marshall & North, 2003). Music education with such perspectives usually has multiple fulfillments in the weekly lives of growing musicians. Their time runs through choirs, orchestras, bands, all sorts of concerts, with a variety of styles and genres. The value system of this cultural context, life-situation or lifestyle including the music instrumental lessons appears most likely as an intensified experience (Dewey 1934), when the musical activity as a whole turns out to be rewarding and fun.

Rather than presenting proposals for the *objects* of instrumental lesson activity, the purpose at this point was to introduce the concept of an *object* as a key to understanding and distinguishing activities. Further discussion regarding the *object* of instrumental lessons is offered in Chapter 4.

3.3.4 Tensions within teaching and learning music

One of the research strategies of Activity Theory is to recognize and articulate contradictions within an activity. In examining instrumental lesson interaction this seems a useful research strategy, because tensions and contradictions appear often in music making and musical learning: these processes proceed under constant evaluation at the edge of learning and knowing, on one hand, and achieving competences, on the other. As an example, a tension may appear between teacher dominance and student autonomy. According to Yarbrough and Price (1981), an effective teacher-student work on music should follow the complete patterns of instruction (stimulus-reaction-response). However, this process of patterns, in which the more competent and experienced musician initiates and the other party follows the advice and control, may conflict with the outspoken aspiration of the students' autonomy (Gaunt 2006) and student ownership of the musical engagement (Custodero 2002b). Chapter 2 discussed, for instance, how teachers express the student autonomy as a goal for their work, while the teacher dominating strategies characterize their lessons. This is an example of tension between tools and the object.

Another tension may appear between developing musical expression and developing the teacher-student work. Typically, teachers and students are oriented toward change, as they

search for and develop musical expression, instrumental skills, and musical knowledge. The process of evaluation or development does not, however, usually concern the development of collaborative work. The activity of teaching and learning itself often remains the same despite the fact that the obstacle of development in producing, rehearsing, or attaining musical knowledge may be actually within the lesson activity (see Section 2.1). Hence, the development of musical expression does not include the development of the context. The tools for development may be the same, for example, when using Y. Engeström's seven-step process (see above) in their process of development. But the object is diverse. In other words, in broader context the tension may appear between musical culture and the culture of music education.

In general, the tension between context and learning are based on internal contradictions within each corner of the activity system of the instrumental lesson. Although the teacher-student interaction reflects the emerging tensions, they often remain unarticulated and, therefore, the participants are often unable to deal with or reflect upon the emerging disturbances in their interaction. Gaunt (2006) reported in her study that there is just no time or traditional conventions for reflections concerning the lesson context or organization of the work (see Chapter 2). In addition, this study argues that the teachers and students need tools for reflection. These tools enable the process of developing the activity. But for this process, the teachers and students have to be able to articulate conflicting elements of their work.

The examples provided above refer to applied teaching and learning strategies. The alternatives of instrumental teaching and learning strategies resonate presumably with the tensions, which have their roots in the primary contradictions of the activity of instrumental teaching and learning. Accordingly, tensions appear when the search for musical expression on an instrument and the activity of instrumental teaching and learning, or the activity of rehearsing an instrument, does not support the quality of a musical performance. This affects student motivation. Therefore, in creating motivation and learning contexts for learners, alternating teaching and learning strategies are central in viewing the process of preparing and anticipating musically and pedagogically in the activity of instrumental teaching and learning. For instance, a primary contradiction of tools may appear as a tension between methods of recollection versus investigation. For teaching and learning strategy, this means learning by

memorizing or imitating a provided musical model versus learning by examining musical and technical elements as a method of learning how to perform a musical composition.

The essential contradiction, according to Y. Engeström (1987), is the mutual exclusion and simultaneous mutual dependency of use value and exchange value in each “commodity”. This *double nature* and inner unrest is characteristic to all the corners of the triangular structure of activity. The modified illustration (an activity of instrumental lesson) in Figure 3.5 is based on Y. Engeström’s model of primary contradictions of a central activity of school participation.

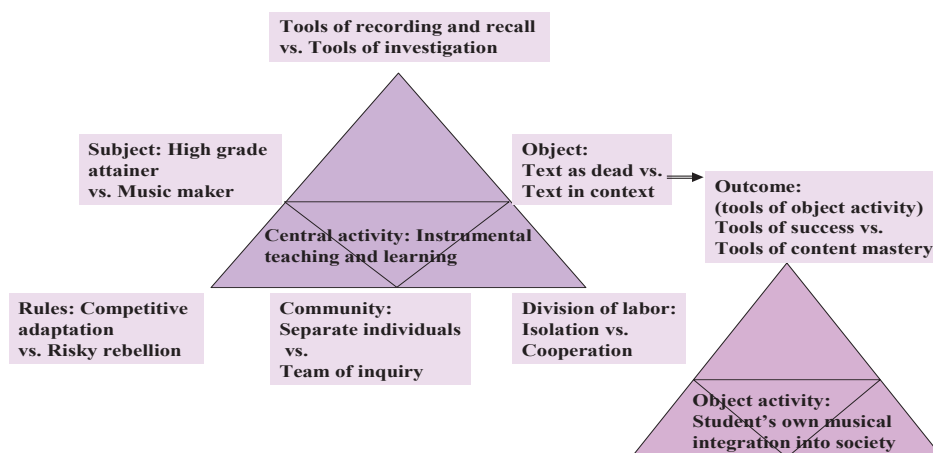


Figure 3.5: The primary contradictions of the activity of instrumental teaching and learning (modification of a model elaborated by Engeström, Y. 1987)

As Figure 3.5 illustrates, the subject (teacher and student) deals with a tension of being a *high grade attainer versus being a genuine music maker*. This tension refers to the subjects’ attitudes toward using music as means for building identity or high status in the society versus making music as a music lover. Within the community, the tension concerns students *working separately in and outside the lessons versus working together as a group* or class. Similarly, the teachers may work *separately versus in co-operation* within a team of artistic inquiry. At the same time the learners rehearse *in isolation versus in cooperation*, adapting to institutional or *teacher-oriented rules versus studying in their own pace* and by their own rules. While

imitating a musical *model by a distinguished performer versus investigating and studying different possibilities of music making*, they view music as *given in the score versus viewing music in its original* or present context. Finally, as an outcome of the instrumental lesson activity, the student and the teacher attain *success or money versus musical knowledge or competence* by successful learning processes.

The extremes in the examples above may dominate the everyday teacher-student work. In both extremes the participants may be passionate for music or musicianship, and in an optimal case they work hard together and separately. However as an outcome, the apparently thin line between these extremes in music education may engender quite different kinds of individual and social music making culture: musicians with radically different strengths. Consequently, the distinction is emphasized in everyday guidance, cultivation, discussions, and in fostering of both extremes in the process of utilizing the best of both sides. For example one line of criteria for successful musicianship has characteristics of pure cultivation of sound quality and errorless representation of the written score of the music performed with personal interpretation of the music. The other line of criteria, content mastery (Figure 3.5), includes also strong instrumental competence with wide interest in creating and developing musical material and contexts.

The primary contradiction, in the outcome, tools of success versus tools of content mastery, is evident in every corner of the activity system, and reflects the everyday life of the instrumental teacher and student. As Y. Engeström (1987, 121) emphasizes, “it is not a question of 'choosing' the more appealing alternative within each corner of the model. One has to take both. The contradiction cannot be swept away by moral decisions.”

Furthermore, crucial in understanding how activity systems develop, is the recognition that activity systems exist in networks of activity systems (Engeström, Y. 1987; Hakkarainen 2002a). The central activity of an instrumental lesson produces, as an outcome, tools for a neighbor activity, student’s own musical integration (Figure 3.5). Engeström, Y. (1987) explains that “neighbour activities” include *first* of all the activities where the immediately appearing *objects* and outcomes of the central activity are embedded. (Y. Engeström calls them *object-activities*). In instrumental learning, other kinds of learning activities within musical and pedagogical work benefit from the outcome of a lesson activity. Therefore, *secondly*, neighbour activities include the activities that produce the key instruments for the

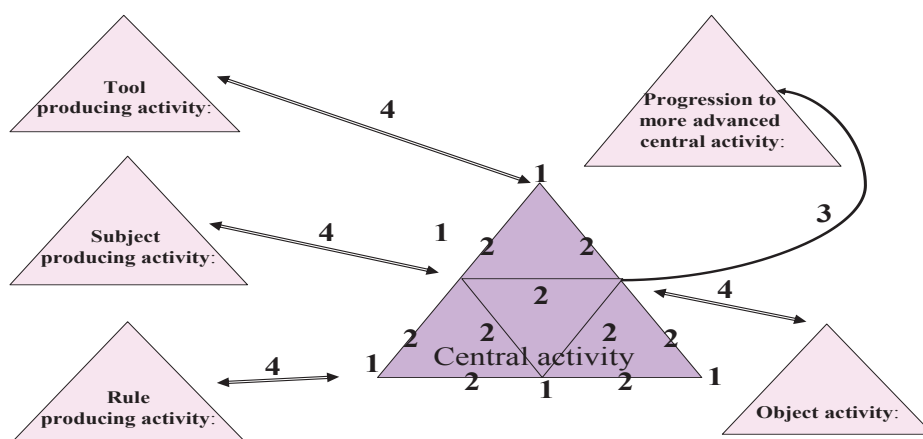
central activity (instrument-producing activities). *Thirdly*, neighbour activities include activities like education and schooling of the subjects of the central activity (subject-producing activities). *Fourthly*, neighbour activities include activities like administration and legislation (rule-producing activities). Naturally, neighbor activities also include central activities which are in some other way, for a longer or shorter period, connected or related to the given central activity, potentially hybridizing each other through their exchanges.

Musical and pedagogical work too often takes applied tools, musical, pedagogical and instrument specific rules, and the identity of subjects for granted. Therefore, this study maintains that the identification and analysis of “neighbour activities” of an instrumental music lesson also are crucial for understanding the intensity of teacher-student interaction. The point here is that the teaching and learning activity of an instrumental lesson (central activity) produces tools, identities of subjects, and rules for musical teaching and learning for its part (Figure 3.5). Even though as an effect, other activities outside the lesson also have their part, they remain inaccessible within the scope of this study.

3.3.5 Four layers of contradictions

Consequently, contradictions of instrumental lessons may appear on different levels. Engeström, Y. (1987, 1995) discerns four levels or layers of contradictions in his analysis of human activity. The contradictions on different levels are a constituent part of Y. Engeström’s expansive cycle, which enables the development of a qualitatively new form of activity. An elaboration of the activity system model depicted in Figure 3.6 illustrates these levels. The primary contradictions, indicated by 1 in Figure 3.6 (see Figure 3.5), often remain latent, unnoticed, or unarticulated, as mentioned previously, in the context of music education. For example, teacher modelling is often used as a self-evident tool for musical learning. An inspiring model provides the student with huge range of musical and pedagogical information to work on, while this information may also include purposeless and undesirable mannerism. Secondary contradictions (number 2 in Figure 3.6) appear, when, as a consequence of some outside ingredients, some elements of an activity system change qualitatively while others remain the same. For example in instrumental teaching and learning, new rules concerning music played in exams may lead to conflict between these rules and traditional tools (musical material), or between the new rules and the *object* or outcome (expected competences).

Therefore, the changes within rules influence the whole activity system, and as an outcome, an elaboration process of changes may generate new organisation of the activity system. The third contradiction (number 3 in Figure 3.6) appears as the old convention remains rebelling against the new form of an activity system. When the new activity system becomes established it conflicts with one or more neighbour activities. These are the fourth level contradictions (number 4 in Figure 3.6).



- (1) The primary contradiction, often latent, exists between exchange value and use value within each corner of the triangle of activity (see Figure 2.6).
- (2) The secondary contradictions are those appearing between the corners.
- (3) A tertiary contradiction between the object/motive of a new form of activity and the old convention.
- (4) The quaternary contradictions appear between the new central activity and one or more “neighbour activities”

Figure 3.6: Four layers of contradictions (Engeström, Y. 1987)

For instrumental teaching and learning, a search for solutions within the contradictions on each of the four levels (Figure 3.6) means entering the zone of proximal development.¹² The proximal development is a transformation process with past, present and future, as well as with possibilities of activity (Vygotsky 1978).

For solving and elaborating new possibilities in work, the developmental work research (DWR) has produced new methods and approaches under the framework of an expansive learning cycle (Engeström, Y.1987). In the paradigm of the developmental work research “the

¹² Vygotsky’s (1978, 86) notion of the zone of proximal development (ZPD) refers to the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers.

zone of the proximal development” (ZPD) (Vygotsky 1978, 86; Engeström, Y.1987, 174; 1998, 144) means that change is viewed as a historically and socially new form of organization of collective activity. As a comparison, while development in ZPD by Vygotsky is determined by adult guidance or by collaboration with more capable peers, Y. Engeström’s historically new form of the societal activity in ZPD can be collectively generated. In Vygotsky’s model, development concerns independent problem solving, whereas in Y. Engeström’s formulation of the ZPD, learning includes the development of the whole activity, the organization and context of the work; in music, for example, the context of instrumental teaching and learning.

It seems that instrumental lessons as an activity seldom enter the expansive cycle. The tradition of the one-to-one teaching and learning is strong and often considered essentially valuable (see Chapter 2). Even if the teachers and students feel uncomfortable regarding their current activity within instrumental lessons, development often seems to be impossible. One of the reasons for not really entering the ZPD of instrumental teaching and the expansive learning cycle is the lack of means understanding the contrasting elements of their work. Through Intensity of Interaction and by the tools of Activity Theory this study aims to better understand, identify, and articulate the dynamics and tensions of the teacher-student work.

3.4 Collaborative activity of the instrumental music lesson

Central to this study is the view that the instrumental lesson is collaborative activity, with the means of musical pedagogy. Put in terms of Activity Theory, the teaching and learning strategies (tools) of an instrumental lesson activity emerge as an outcome of the cultural-historical tradition in musical and pedagogical activity (Figure 3.7). In the activity system of musical pedagogy, the nationwide curriculum and specific syllabus of an institute or school explicate (tools) how to manage musical teaching and learning. For example, organizing musical and pedagogical events or sharing a research project provide teachers and student with an intensive process of motivation and preparation for the problem solving of musical lessons. Therefore, from such a perspective, the task of performing publicly or examining matters together may serve as tools for teaching and learning.

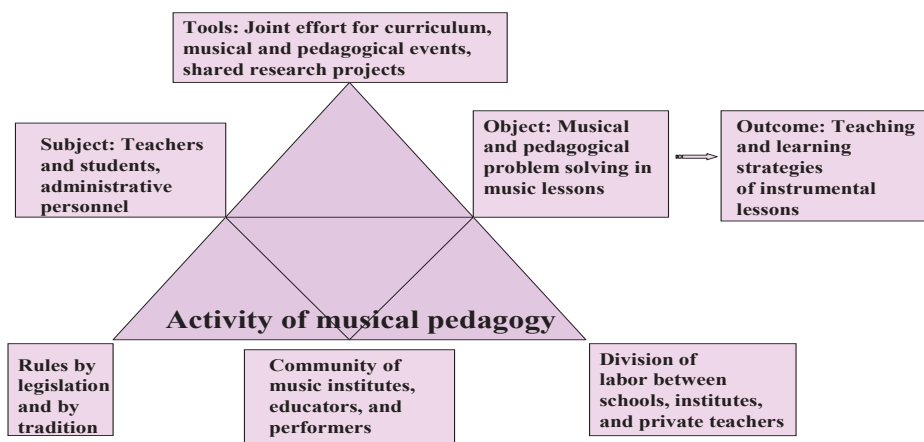


Figure 3.7: Collaborative activity of musical pedagogy about collaborative activity of lessons

In the lessons, teachers and students share the music, the challenges in instrumental and musical problem solving, and the learning environment of the class and the institution. This *object* of the activity of musical pedagogy is connected to the national legislation (rules), musical institutes and schools (community), and how and what elements of music the institutes and schools emphasize (division of labour) in their work. Crucial, from the perspective of this study, is to articulate the common elements of communication and musical expression as tools and *objects* of instrumental lessons; the teaching and learning strategies of instrumental lessons (outcomes).

A teacher and student might, however, enter the lesson from rather distant perspectives of aesthetic and qualitative ideals. Their experiences of musicianship and their positions as, respectively, an instructor and a learner, can appear to be quite different. After all, the teachers' and students' search for a common perspective and *object* through interaction interests this study. Furthermore for this study, the teacher-student interaction is what Edwards and D'arcy (2004) call relational agency. Rather than being simply a matter of collaborative action on an object, relational agency "is a capacity to recognize and use the support of others in order to transform the object" (Edwards & D'arcy 2004, 149).

In her observational study on the teaching practice of renowned pedagogue Dorothy Delay, Gholson (1998) characterised the interactions in lessons as conversational rather than didactic. She then theorised the relationship not as apprenticeship, but in terms of mentoring, Vygotsky's (1978) proximal positioning. The proximal positioning attempts to explain the strategies used by a more capable other in relating to students' zones of proximal development and assisting students through those zones. Gholson argued that this theory is important, because it reveals the nature of interaction and presents models for developing effective lines of instructional communication and operation between teachers and students.

Gholson (1998) identified five thematic threads which contributed to the efficacy of the interactions: high levels of functioning in both teacher and student; reciprocity through mutual feedback; developmental cycles; a protective and nurturing context; and the benefit of the relationship to both participants. In her thesis, Gaunt (2006) comments Gholson's study to be significant in moving away from theories of transmission or apprenticeship, to emphasise the reciprocity of the relationship, particularly mutual feedback, and the importance of this benefit to the teacher as well as student.

Itzhak Perlman compared DeLay's pedagogic approach with that of another, quite different but well-respected Julliard music teacher:

With Galamian there was almost no room for give and take because he had a particular system that he applied to everybody. Miss DeLay was much more flexible, was much more into the person, and into their background, into what makes them tick. I would come and play for her, and if something was not quite right, it wasn't like she was going to kill me. That's where we come to the differences between the two. She would ask questions about what you thought of particular phrases -- where the top of the phrase was, and so on. We would have a very friendly, interesting discussion about 'Why do you think it should sound like this?' and 'What do you think of that?' I was not quite used to this way of approaching things. (Kozinn, Allan. "Dorothy DeLay, Teacher of Many of the World's Leading Violinists, Dies at 84." New York Times. March 26, 2002.)

Gholson's findings lead the way to the starting point of this study: Rather than analysing the didactic or communication techniques of the parties in the lessons, the emphasis lies in analysing the interaction in the lessons as collaborative activity. As explained in this chapter, this study views interaction in instrumental music lessons as a process of shaping and elaborating common musical *objects* in the activity system of a lesson.

Several researchers have conceptualized joint teacher-student work in terms of collaborative activity work. From the perspective of this study the examples below widen the

potential of instrumental music lessons. Carol Kramsch (1993) proposed the concept of 'contact zone' to describe important learning and development that takes place as people and ideas from different cultures meet, collide, and merge. Kris Gutierrez and her co-authors (Gutierrez, Rymes & Larson 1995) suggest the concept of 'third space' to account for similar events in classroom discourse where the seemingly self-sufficient worlds of the teacher and the students occasionally meet and interact to form new meanings that go beyond the evident limits of both. In a complex of three activity systems Lambert (1999) introduced what she calls "learning studio"¹³. It is a strategic intervention, a new type of socio-organizational situation. While studying occupational therapy education in polytechnics, Konkola (2001) conceptualized a hybrid space between school and work she calls the boundary zone.¹⁴ More apt to the musical empirics of this study is what Winnicott (1971) calls the 'potential space'. By working in this potential space, the teacher might have life-enhancing effect upon pupils, developing the field of cultural activities that lies between subjective and objective realities. Others have also, in different ways, identified what Swanwick (1999) calls the 'space between', where we create meaning, and articulate and communicate experience. For instance, Bronfenbrenner (1979) discusses ecological transitions – shifts in role or setting – which occur throughout the life span. Different kinds of settings, that is, places where people can readily engage in face-to-face interaction, are analyzed in terms of their structure (Bronfenbrenner 1979, 56-82). One of the basic units of analysis is the *dyad*, or a two-person system. A dyad is formed whenever two persons pay attention to or participate in one another's activities. The dyad is a context of reciprocal development.

Conclusively, to consider an instrumental lesson as a dyad, space between, potential space, boundary zone, learning studio, third space, or contact zone, opens wide potential for proximal development of music education. This study argues that central in understanding the teaching and learning strategies (outcome of the activity of musical pedagogy, Figure 3.7) are questions concerning the means of communication and the *object* in learning musical expression. Chapter 2 stated that Activity Theory views communication and dialogue as

¹³ Learning studio offers an opportunity to interpret, modify and reconstruct the knowledge and skills produced in the teacher education, in an interactive process of boundary crossing (Lambert 1999).

¹⁴ Konkola & al. (2004) explain that when the teacher goes to the work places and meets students and workers it is also a meeting of different activity systems. She describes boundary zones as a kind of "no man's land" in which there are elements of three different activity systems – teaching, studying and working. (Konkola, Tuomi-Grön, Lambert & Ludvigsen, 2004).

intellectual activities of production and distribution amongst persons, activities, artefacts, and settings. An *object* motivates the activity of musical cultivation and rehearsing. My aim at this point of this study is to create means for articulating and understanding the mechanisms of the teacher-student dialogue. In order to analyze the musical and pedagogical meaning construction, Chapter 4 introduces the Method of Voices, and discusses its application and adaptation into the instrumental music lesson context.

Chapter 4

The Method of Voices

The present study examines Intensity of Interaction by focusing on the means for communication in instrumental music lessons, and in this chapter I elaborate a method for empirical analysis of this communication. Communication and language use, both verbal and non-verbal, are meant to create understanding in musical thought and action. Such activity also presumes communication with the musical material and oneself (Johansson 2008). Altogether, music making within the scope of this study covers communication between teacher and student, with musical material, with fellow musicians, and, indispensably, with the audience (Davidson 1997).

For my work on the method, I found useful the Method of Voices elaborated by Ritva Engeström, R. (1995, 1999a; 1999b) in her study on doctor-patient conversations in medical consultations. She draws on AT in order to understand and study communication in tool-mediated activity. In her study, activity refers to clinical problem solving, in which interaction is considered through historically emerging and internally conflicting processes of human rationality on how to give medical care to the patient. Instead of only as intersubjective (between persons) reality, language use is also seen as object-oriented activity. The empirical focus is on individual actions which are defined as productive processes, where the subject is connected to the object with culturally constituted mediational means. Actions imply not only practical and cognitive but also interpretive elements of activity. In AT tradition, language is viewed as a specific means, an instrument, and an instrument for other instruments, due to its potentials and resources for reflection and sense making¹⁵ (see Engeström, R. 1999a; Hakkarainen 2002a).

This study applies the Method of Voices for analyzing the transcribed data from the instrumental lessons. The method integrates situational and culturally constructed features of communication, which originate in the historical background of the instrumental music lesson

¹⁵ Hakkarainen (2006) offers the following terminological comment on sense making: The original Russian terms “smysl” and “znacenie” are difficult to translate into English. The scope and content of “sense making” and “meaning making” are broader in Russian. They are often translated with the terms “personal significance” and “meaning.” But their difference is essential in studying children’s play where “as if” acting is based on “sense making” and not “meaning making.”

and music performance practices. Chapter 2 introduced several studies that have found an asymmetrical tendency in instrumental lesson interaction. The asymmetry returns to power relations, common to professional encounters, between the one who is knowledgeable (such as a teacher) and the one regarded as less knowledgeable (such as a student). Instead of observing the teacher-student relationship in these terms (e.g. Rostvall & West 2001; Tuovila 2003; Gaunt 2006; see Chapter 2), this study aims to break away from the epistemic dichotomy by investigating possibilities of a new epistemology based on the diversity of socially constructed knowledge (Engeström, R. 1999b).

The Method of Voices is content specific because of its emphasis on cultural mediation. This means that the analysis of instrumental lesson interaction needs to elaborate specific tools and their history. These emerge in the musical and pedagogical sense making for the domain of music. Despite certain similarities with the doctor-patient interaction, this study applies the Method of Voices quite freely while still respecting its principles.

4.1 Unit of analysis for understanding interaction

The Method of Voices relies on Mikhael Bakhtin's insights on communication. Bakhtin (1981, 281) had an idea that linguistics and the philosophy of language in general deal only with "a passive understanding of discourse where the utterance's neutral signification and not its actual meaning" is in focus. Wertsch (1994, 205) has stated that in Bakhtin's hands, the utterance is "a form of mediated action". In line with this statement, R. Engeström (1999a, b) has proposed that the utterance serves theoretically as an expanded unit of interaction that takes in and is reflected in dialogicality. In human activity, dialogicality is the fundamental capacity of the mind to conceive, create and communicate about social realities in terms of "the Alter" (see Markova 2003).¹⁶ Respectively, R. Engeström elaborates three components of the unit of analysis: (1) the object, (2) social ontology of the subject, and (3) the mediational means.

In regard to the first component Todorov (1984) points out a dual orientation of language in Bakhtin's writings. This notion is central for R. Engeström's interpretation of Bakhtin because it elaborates the *extraverbal context* as a necessary constitutive element of the

¹⁶ In dialogicality the *Alter* refers to the mutual interdependence of participants and their mutual effect on one another. Respectively the Ego-Alter refers to communication within and between groups, subgroups, communities, societies and cultures (Markova 2003, 90–91).

semantic structure of an utterance. According to this interpretation and in terms of Activity Theory, besides the speaker as a part of extraverbal context, the speech situation consists of the "*object*" with two meanings. The utterance is addressed to somebody, an interlocutor (or potential interlocutor) and is oriented toward life, i.e. content in the sense of the possibilities of human activity. Language is realized by participants in various areas of human activities (Bakhtin 1987, 60).

In the empirical data of this study, consisting of instrumental music lessons, the teacher and the student take into account their interlocutors in selecting their words and speaking in order to orientate toward and act on the music. Within and in interaction, they search for questions, help, advice, or information for resolving musical or technical matters as their object of the instrumental lesson.

The second component of the unit is the social ontology of the subject. Never *in and of itself* original, an utterance is always an answer to another utterance and is always addressed to somebody in terms dialogicality. Moisala (2003, 19) transfers Bakhtin's view of language as something that exists on the borderlines between the self and the other to music, which "correspondingly is found in an intertextual room, in a discourse between the creators and the interpreters, who are also, explicitly or implicitly, part of a dialogical relationship to the contexts of the texts and to all previous articulations". This relational view of language, as transferred to music, emphasizes its character of performance and of a happening which, like in musical interaction, relates to the listeners and to the already existing music in the present moment.

The third component is *the word* (sign) as an instrument of *mediational means*. According to Engeström, R. (1995), words are culturally shared and distributed cognitive artifacts. Prior to the moment of appropriation, the word does not exist in neutral and impersonal language but rather in other people's mouths and in other people's concrete contexts, serving other people's intentions. It is from there that the speaker must take the word and make it one's own (Bakhtin, 1981, 293-294). "The speaker populates it with his own intention, his own accent, when he appropriates the word, adapting it to his own semantic and expressive intention" (Bakhtin 1981, 293). In this sense, words do not exist inside or outside of individual consciousness; but rather "(a) word in language is half someone else's" (Bakhtin, 1981, 293).

The 'actual meaning' implied by Bakhtin is the meaning created in a dialogue, which takes place not only between the sender and the receiver in the immediate situation. As noted by Wertsch (1994, 206) the picture of utterances as mediated action is

...one in which there is an irreducible tension or dialectic between mediational means, with their reiterative properties on the one hand and the uniqueness, or nonrepeatability of instantiation on the other.

Through such kind of unit, as R. Engeström (1995) summarizes, interaction is directed to a *referential object* that carries dialogic relations to other utterances, past and future, and is open to interpretations which imply meaning construction by actors in the practical activities of which communication is a part. Therefore, the unit addresses methodology for studying language use as object oriented activity which deals with *cultural* dynamics. Instead of culturally given and standardized content, the object of communication is connected to language "in its heteroglot development" (Bakhtin, 1981, 356).

The historical past and the emerging future are present in all musical engagement. Even private music making would still be culturally oriented: my musical engagement carries intertextual references to past and future, and experiences and emotions with musical expression in dialogic relation to the outside world (see Chapter 2). Ethnomusicologist Andrew Killick (2006) accordingly acknowledges solitary music making as a social and cultural activity. He concludes that "even solitude is social" or, in Killick's terms, "even holicipation is a form of participation" (Killick 2006, 296). At this point, central to musical interaction is that it conveys the relationship between the musical material produced earlier, or oriented to the future, in other words, my present event jointly produced by the community of my musical and instrumental genre.

4.2 Language in musical interaction

In order to conceptualize the semiotic (cultural) mediation in an instrumental lesson, this section discusses the language or sign systems used in musical engagements. Although different systems can be extracted within musical and pedagogical material, this study argues that mediation in instrumental lessons is a functional whole.

This study emphasizes the combination of socio-cultural and pragmatist approaches to learning and language, and the use of the archaic, non-verbal, or musical components of language. This means that origins of language and of music are similar; they originate in

social situations. Musical practice is always social and not individual in the sense that thinking employs shared ideas and experiencing. Making sense is done in certain contexts of shared practices.

Recent research in the UK and Scandinavia has discussed the relationship between the use of verbal and non-verbal, linguistic and musical languages, as well as teacher orientation in language use (e.g. Goolsby 1996; Rostvall & West 2001; Gaunt 2006; Karlsson and Juslin 2008). Recently in Europe, the emphasis in music education is moving away from strictly teacher orientation towards a tendency of interactive approach (see Chapter 2). Such an approach consists of musical interaction, playing together, playing in turns, and improvising; expressing musically to and with each other without talking and articulating, conceptualizing, or without reflecting further on the activity. The activity is mediated by music and meaning construction with means of musical expression, logic, rules, tools and signs. This kind of musical language functions as a teaching strategy common in instrumental lessons.

Along with the joint flow of music making, music students and teachers have considered time for speaking and reflections important in their instrumental studies. On the one hand, Gaunt (2006) found that the extensive possibility for reflections within lessons widens the scope of instrumental education from mere skill training toward musical and human growth. On the other hand, from the perspective of effective instruction, too much talking makes the musical flow vanish, slows down the work, complicates the musical problem solving, and weakens the mystery of musical innovations. Goolsby (1996) reported that less time was spent in verbal instruction by experienced instrumental music teachers than by novice teachers, and significantly less than rehearsals conducted by student teachers.

Not only the amount of time for speaking but also the content of speaking has been shown to vary in the instrumental lessons. According to Goolsby (1997), teachers directed most verbal instruction to rhythm/tempo. The expert teachers in his sample were characterized by providing verbal instruction for tone quality, intonation, expression/phrasing, articulations, and guided listening to a greater extent than did the student teachers or the novice teachers. The expert teachers were the only teachers to use adjectives/ adverbs to instruct the band to play energetically, and they provided the most nonverbal demonstrations and explanations (which frequently included how students could improve intonation and/ or tone quality). The expert teachers also used drill on short passages more frequently than did the other groups of

teachers as indicated by their use of "again." Overall, the expert teachers asked fewer questions than did the student teachers or the novice teachers, but the expert teachers' questions were usually specific and focused. Goolsby (1996, 1997) argues that the expert teachers are efficient in indicating what is desired by providing instruction on several performance variables during teaching segments (academic task presentation). Parallel to this efficient use of verbal instruction, he points out that the expert teachers used more demonstrational explanations of how the performers were to achieve what was desired. The expert teachers also used the single word instructions "again" and "watch" more than did either the novice or student teachers.

In analyzing instrumental lesson interaction, this study aims to understand how language and music are used in instrumental lesson communication; equally important is to understand the focus, source, and means of communication in instrumental lessons. Therefore, language and music as means of instrumental lesson communication deserve attention. The following five points discuss some similarities and differences of relevance between the respective mechanisms of linguistic and musical sign systems.

Firstly, language and music are similar in the sense of expressing emotions. However, they function with different means and resources. Davies (2003, 502) explains that although music can express emotions, it is "sentient, and not the kind of item that can experience an emotion to which it gives expression". Musical utterances are like linguistic statements about the emotions. "Music is an expression not of raw feeling, but of thoughts about the emotions" (Davies 2003, 503). For Susanne Langer (1953, 27), music is a kind of symbolic system resembling forms of emotions with units similar to linguistic symbols, which are, however, a sort of defective signs. In other words, music does not mean emotions; music only possesses similar kinds of attributes. Määttänen (2005, 237) points out that a tonal phrase or musical feature does not have to refer to some other thing. The fact that meanings in music are unclear does not mean that music has no meanings (see also, e.g. Välimäki 1998; Rechartd 1998). To the contrary, musical meanings generate an endless interweavement of meanings.

Secondly, as an answer to the relationship between linguistic and musical sign systems some theorists suggest that music has similar to language, its own grammar and syntax (Cooke 1959; Langer 1953; Elliott 1995). This has been opposed by Scruton (1997) who claims that semantic structure in music, presented as literal truth, is unsustainable. Music has

structure of a kind, but it is neither syntactic nor semantic. Even if, for Scruton, the linguistic analogy is more metaphor than simile, the concept of musical “syntax” is still useful. Specifying syntax in music, Elliott (1995) argues that the syntactic parameters of musical design include melody, harmony, and rhythm, while the non-syntactic parameters of musical design include timbre, texture, tempo, articulation, and dynamics (see also Meyer 1989). For example, as Elliott (1995) explains, pitch and rhythmic patterns can be divided into discrete relationships so that the similarities and differences between them are proportional. In contrast, musical patterns of timbre, texture, tempo, articulation, and loudness cannot be segmented. “There is no equivalent in timbre to a minor third or a dotted quarter note. Timbres can only be brighter or darker in relation to other timbral patterns. Non-syntactic patterns tend to persist until they cease or alter, or until changes in syntactic dimensions (e.g. cadence) signal a change” (Elliott 1995, 94).

Thirdly, meaning in music is, if not exactly rule-governed, at least regular and predictable. Compared to the grammar of language, we would need some musical equivalent of a vocabulary, phrases, harmonies, progressions, and so on with a fixed and repeatable significance. Both linguistic and musical sign systems have rules, but rather than rules of grammar, as Scruton (1997) argues, these rules are generalizations from a musical tradition. The tradition of tonal music contains something that is shared, trustworthy and established, which reminds us so vividly of a natural language. As with natural languages, there are rules in music, but they are not usually prescriptive. This study agrees with Scruton that most of the rules are derived post facto, like laws of classical harmony. In music, as in language, it is only in the whole context of the utterance that any element has meaning, but unlike language, its contribution is not and cannot be constant. Even if there were a “generative grammar” of tonal music, it would not tell us how tonal music is composed (Scruton 1997, 202).

Fourthly, when the non-verbal components have the dominant role in instrumental lessons, the meaning construction can be called, according to Välimäki (1998, 372), “archaic thinking”. To work by “archaic” mediation emphasizes experiencing music through playing and listening in a lesson, in other words “music speaks for itself”. In addition to this, Karlsson and Juslin (2008) have shown that instead of using specific words, teachers seemed to convey a general, intuitive way of thinking, which served mainly to help students to discover the ‘secrets’ of expression on their own. In their study of expression and emotion in instrumental

music teaching, Karlsson and Juslin found that most of the comparatively few teaching sequences that focused on expression involved implicit (often non-verbal) teaching strategies, such as modeling¹⁷ (see also Byrne 2005). When expression was addressed explicitly (in words or clear intention), it was usually in terms of quite vague statements that provided little concrete advice about the playing to the student.

Fifthly, non-verbal musical mediation is often connected to body movements. This bodily aspect offers a whole sign system of its own. Dalcrozian framework offers a sign system, where the whole human being is transformed through music within musical practices (Jaques-Dalcroze 1920/1965). In embodied musical agency, the body and the mind function as complex interacting allies of the experiencing and acting organism as a whole. The bodily experience of music opens the doors of hearing, feeling, understanding, reproducing, remembering, and inventing (Juntunen 1998). In embodied experience, the constant interaction of rhythmic movement, aural perception, and improvisation is central. In the bodily exploration of music, movement is spontaneous and joined to cognitive conceptual responses involving locomotion and gesture.

In instrumental teaching and learning the bodies of teacher and student function as the means of music and sound production. Their bodies “speak” directly to each other through and in music. As Juntunen writes, exercises bring awareness to students' physical responses to music so that the body and the ear form a dynamic partnership. In this partnership, listening inspires movement, while moving guides and informs listening (Juntunen 1998).

In sum, and along with Westerlund and Juntunen (2005), this study maintains that the human organism is a functional whole; the mind and body are inseparable. Consequently, musical and pedagogical interaction consists of turn taking with different sorts of messages and knowledge;¹⁸ by body motions, mimicry, and expressions of emotions, and to specify, through body language, musical language and verbal language. Therefore, the instrumental lesson is a zone of quite complex, unique, and peculiar mediational means.

¹⁷ The teacher's performance provides a model of what is desired from the student and the student attempts to imitate the model (Karlsson & Juslin 2008)

¹⁸ Bereiter and Scardamalia (1993) distinguish between formal, procedural, informal, impressionistic, and supervisory knowledge (see also Elliott 1995).

4.3 Conceptual schema of Voice Analysis

When analyzing communication, the Method of Voices examines the actual use of language related to the purpose of language use within activities. Engeström, R. (1999b) explains that the voice of the speaker is his or her action that calls for a generalized referentiality that is a social language. Although a social language is born each time again in human interaction it brings about language as historical and cultural form. Concrete speakers appropriate social languages while formulating their turns in communication. The speaker's voice produces and brings forth his or her interpretation of the reality, which is the same as being in the world and conceiving the surrounding environment. Following Leontiev's notion of the levels of human functioning (activity, action and operation) (Figure 3.1 in Section 3.2.2) R. Engeström has elaborated the conceptual schema of Voice Analysis as follows (Table 4.1)

Leontiev	Bakhtin	
Activity	Social languages	Social context of meaning (other's word)
Actions	Voices	Subjectivity of the speaker (my word)
Operations	Speech genres	Typical forms of utterances

Table 4.1: Conceptual schema of Voice Analysis (Engeström, R. 1999a, b)

Operations in the process of meaning construction, such as *speech genres*, are more or less automatic means of expression. In producing music, *operations* are movements, bowings, fingerings, shifts of position, and the like, which take place without conscious focusing. They crystallize the habits of speaking and conventions of musical expression in constructing voices or actions. The *voices* as communicative actions are seen empirically as such but exist analytically only in the context of an activity. Actions in the analysis of an activity are rather connected to the historically long lasting joint activity of humans and to the means of expression, namely operations.

Close to the above line of thinking, Määttänen (2005) specifies the relationship of music and music making to activity. A melody or musical phrase unfolds in time as a whole. The hearer or the player anticipates the possible logical continuation of the melody by, for example, the harmony, rhythm, style; based on the past, the melody takes shape heading

towards the future. In the case of a music performer or audience member, these “operations” are their habits of production of and listening to music, respectively. Activity consists of sedimentary actions and has its own shape and history. While proceeding and thinking we anticipate the continuation with the situation in mind. Consequently, for Määttänen (2005, 243), “melodic thinking resembles cognition”. He argues that the aesthetics of music is in fact aesthetics of action and movement at its best. Through the aesthetics of action, musical activity is also connected to emotions. Emotions are, according to Määttänen’s (2005) pragmatist view, qualities of action.

As the schema of Voice analysis implies, the method analyses the actions (subjectivity of the speaker), which are directed to referential objects. These objects carry dialogic relations to other utterances in the past and anticipated future. In order to approach dialogic relations in the culture- and community-specific context, the Method of Voices presupposes that an analyst examines substance-oriented social languages. This process will be explained in detail in sections 4.4–4.7.

4.4 Social languages

The social language represents the viewpoint, conceptually orientated horizon and culturally minded perspective, which is called forth when constructing meaningful activity (R. Engeström, R. 1999a; 1999b). A set of social languages displays resources that people invoke in their own sense making. The social language is activated by the actors through interpretation, for their own purposes in the event. The crucial empirical question for this study remains: How do the teachers and students construct, transfer, or exchange musical meanings? The point is that a musically and pedagogically meaningful activity, in terms of the Activity Theory, has a historically and culturally constructed object (see Chapter 3).

In communication, language is used for various purposes. Similarly, musical sounds are used for various purposes. The object of an instrumental lesson is, in general, to improve, change, elaborate and encourage musical conceptions with information and demonstration of instrumental technique, historical background, analyses, technical knowledge, musical elaborations and innovations and performing competence. Moreover, the competences also have different layers, stages or emphases, including personal and musical growth (e.g. Elliott 1995; Hargreaves, Marshall & North 2003), social adjustment and artistic survival strategies

(Hargreaves & North 1997; Davidson 1997), performing abilities and on stage management (Lehrer 1987; Arjas 2002), ergonomics, different ways and forms of practicing (e.g. Hallam 1997; Jörgensen 2000; Nielsen 2004; 2007).

The pedagogical and musical goals set by the performing actors within the lessons invoke communication. The suitable transferring mechanism – social language – is then invoked by the type or form of information and personal experiences of music and of the performing tradition within each situation and from person to person. This situational language, so to speak, is not only, according to Dewey (1958, 174), for “exchanging messages as objects between subjects”. Language, for Dewey, is a “release and amplification of energies that enter into it, conferring upon them the added quality of meaning”. The quality of meaning thus introduced is extended and transferred, actually and potentially, from sounds, gestures and marks, to all other things in nature. “Natural events become messages to be enjoyed and administered, precisely as are song, fiction, oratory, the giving of advice and instruction” (Dewey 1958, 174).

At first glance, the world seems to be interpreted by an extremely broad range of social languages (Engeström, R.1999a). Music alone has different paradigms across cultures and also within the pedagogy of the Western music domain. In a study related to situated actions, the variety, however, turns out to be quite restricted. Institutional music education in Finland has traditionally been based on Western music. It gives a perspective through which the activity is accomplished and understood.

Social languages are approached empirically in the Method of Voices with the help of the matrix based on two different data gathering procedures (R. Engeström (1999b)). One deals with the object through generalized “previous utterances”, which apply, in this study, to music and are produced within musical activities. The other is related to accomplishing the ongoing communicative event with the means of interaction. These means draw from “ready made ways of packeting speech that allows for creative, emergent, and even unique individual performances” (Engeström, R.1995, 199; see also Wertsch 1991). As has been implicated in the schema of Voice Analysis (Table 4.1), a social language is a process rather than a location: “Speakers not only invoke given resources of social languages”, but in relation to speakers’ actions “all that is reiterative and reproducible turns out to be raw materials and means” (Engeström, R.1995, 198; see also Wertsch 1994). A language system is transformed

into possibilities for further “dialectological individuation”, in other words, social languages live intense social life and change over time (Engeström, R.1995, 199; see also Bakhtin 1981, 356–357).

4.5 Musical knowing in instrumental lessons

The dual orientation of language (Bakhtin 1981; see Section 4.1) makes it possible to view the instrumental music lesson as a joint activity in which a student and a teacher share an attempt to construct the referentiality of their communication. The object is not just an object of the teacher's practical actions. In interaction, the individual actions of both the teacher and the student are oriented toward a shared problem solving on musical material in order to learn and teach to play music. To approach this object I will first specify what this study means by musical knowing, which teachers and students attain, elaborate, and process during the lessons.

Elliott (1995) names five kinds of musical knowledge:¹⁹ formal musical knowledge, informal musical knowledge, procedural musical knowledge, impressionistic musical knowledge, and supervisory musical knowledge. While musicianship is procedural in essence, four other kinds of musical knowledge contribute to this essence in surrounding and supporting ways. Elliott (1995, 60) argues that “knowing how to make music musically and knowing that performing involves this-and-that are two different modes of knowing”.

Procedural knowledge and formal knowledge are logically separable, however, “in action” they are united. Formal knowledge involves verbal facts, concepts, descriptions, theories, and all textbook type information about music. Verbal concepts about musical works and music making emerge from and are discussed in relation to the ongoing musical problem solving. One part of formal and procedural problem solving is to decode and encode musical sound patterns in staff notation, graphic notation, hand signs, or rhythmic syllables. The other parts, in Elliott's (1995, 61) list of types of “formal musical knowledge” such as verbal concepts about music history, music theory, and vocal and instrumental performance practices influence guide, shape, and refine a learner's musical thinking-in-action.

By itself, however, “formal musical knowledge is inert and unmusical”. It must be converted into procedural knowing-in-action to achieve its potential. As a resource material,

¹⁹ Musical knowings named by Elliott follow basically the five kinds of knowing formulated by the cognitive psychologists Carl Bereiter and Marlene Scardamalia (1993).

formal musical knowledge improves the “reliability, portability, accuracy, authenticity, sensitivity, and expressiveness of musical thinking-in-action” (Elliott 1995, 61).

Informal knowledge is the practical common sense developed by people who know how to do things well in specific domains of practice (Scardamalia & Bereiter 1993). Informal musical knowledge is situated knowledge: “it is knowledge that arises and develops chiefly from musical problem finding and musical problem solving in a genuine musical context” (Elliott 1995, 64). As Elliott explains, it derives from two sources. One source consists of a person’s “individual interpretations of” of the formal knowledge of a musical practice. But the most important source is “one’s own musical reflecting-in-action” (Elliott 1995, 64). The informal knowledge component of musicianship crystallizes in a student’s efforts to develop practical solutions to realistic musical problems in relation to the standards, traditions, history, and lore of a musical context.

Impressionistic musical knowledge, as Elliott (1995) has emphasized, makes an essential contribution to musicianship. It helps to assess, categorize, and place musical actions. It contributes to the ability to reflect in and on our actions. Moreover, it is especially important in grounding our ability to make critical musical judgments in action. For this study, “intuition” comes closest to what Elliott means by impressionistic knowledge.

The fifth kind of musical knowledge is supervisory knowledge. It is sometimes called meta-knowledge or meta-cognitions. In Elliott’s (1995, 66) thinking, “this form of musical knowing includes the disposition and ability to monitor, adjust, balance, manage, oversee, and otherwise regulate one’s musicianship.”

In instrumental lessons, teachers and students join in working on musical and pedagogical problem solving based on the complex system and fabric of different forms of knowledge. To construct a shared referentiality of their communication, the parties of an instrumental lesson activity capitalize upon their knowledge and experiences as members of different activity systems.

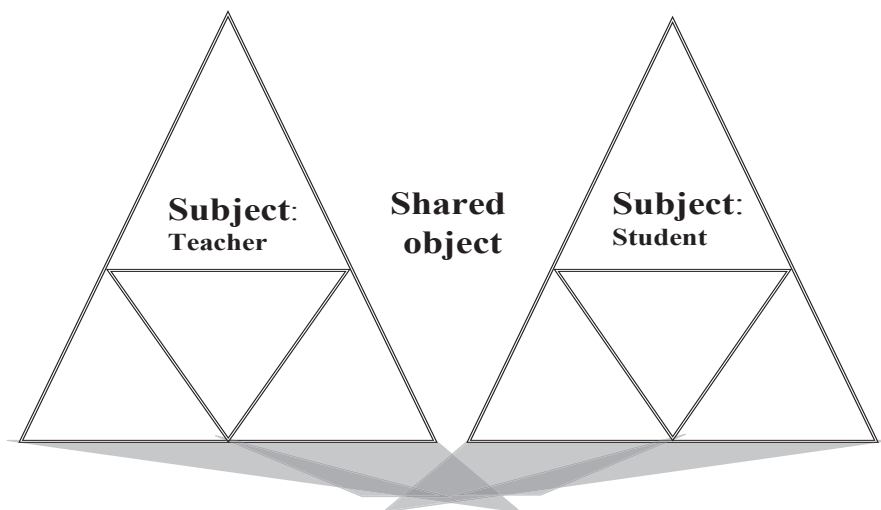


Figure 4.1: Object of the instrumental lesson

The two activity systems in Figure 4.1 demonstrate independent and communicative distance of the subjects, on the one hand, and the historical and cultural interdependency of the subjects, on the other hand, as regards mediational means and tools in a lesson.

The objects are social, educational, and cultural entities. At the same time, the object of an instrumental lesson consists of the personal and social growth in experiencing and expressing music, instrument specific cultivation of technical skills in producing musical expression, attitudes of working alone and together with and on music. This musical work for change and elaboration belongs to a context, which motivates, regulates and directs the activity (Westerlund 2002; Heikinheimo 2003).

4.6 The objects of instrumental lessons

As Chapter 3 has previously emphasized, the identification of an object is always the crucial starting point in analyzing and examining any activity. For the construction of objects of instrumental lesson activity, this study turns to research on philosophy of music education. Three philosophical and theoretical approaches concerning music, expressing and experiencing music frame the suggested objects of the instrumental lesson (e.g. Meyer 1956; Reimer 1968; Elliott 1995; Westerlund 2002; Regelski 2005). The so called (1) aesthetical

approach represents an object of the musical ideal, (2) the praxial approach represents the object being musicianship or musicing itself, and the third (3) approach is called the object of musical re-contextualization in the lesson. The last one offers a context-sensitive, cultural and communal view of music education. This study assumes that the teaching and learning tradition of the instrumental lesson covers all of the three objects.

Object 1	Object 2	Object 3
Musical ideal	Musicianship	Musical re-contextualization
Musical work	Music making	Music in new context
Aesthetic	Praxial	Social-cultural
subjective experience	individual experience	situated experience

Table 4.2: Historically constructed objects of problem solving in instrumental lessons

The musical and pedagogical communities of knowledge have refined their vocabularies, methods, theories and values, and accepted logics through language and their activities. The historically developing heterogeneity in meanings, based on knowledge of musical practice for the problem solving, is depicted by the Table 4.2. In the table, "Object 1", musical ideal,²⁰ refers to the activity where the musical work, seen as musical terms only, is constructed aesthetically. Musical ideal includes knowledge, experience, and orientation towards traditions of the musical aesthetic quality, the written music along with the aesthetic idea of sounds, rhythmic structure and flow, harmony, dynamics, or from its historical tradition and culture. In this approach on the object of instrumental lesson, making music is considered to be a means for subjective and personal experience, not an end in itself. This activity has been mapped out by a number of studies (Langer 1953; Meyer 1956, 1989; Reimer 1968, 1996; Regelski 2005).

Historically, this object has been challenged by for instance the praxial music educators (e.g. Alperson 1991; Elliott 1995; Regelski 2005). They have offered a corrective, a practical musical knowing-in-action view, to the conceptual limitations of the aesthetical view. "Object 2" refers here to the music making and the development of the learner's musicianship as the end in itself. The object 2, related to a person's musicianship, is complicated to articulate, since it is quite independent of any materially existing forms. Generally, this study maintains

²⁰ Further on I will use only "musical" or "musical ideal" for the "object 1" of a lesson.

that musicianship as an object of instrumental lessons consists of a process of practical musical and pedagogical problem solving.

More precisely, Elliott defines in his praxial view musicianship by five forms of musical understanding and knowing. Firstly, musicianship is a *relational* form of knowing: “It is gridlike” (Elliott 1995, 68). Competent, proficient, and artistic music makers know how different aspects of musicing relate to one another in terms of “cause-effect, whole-part, form-function, comparison-contrast, and production-interpretation”. Secondly, musicianship is *coherent*. At an expert level, the various strands of tacit and verbal knowledge that make up this multidimensional form of understanding weave together in a “seamless fabric of fluid thinking-in-action” (Elliott 1995, 69). Thirdly, musicianship includes what Elliott calls *standards of practice*. “Standards of musical excellence, originality, and significance anchor and define the contents of musicianship” (Elliott 1995, 69). This process includes the development of musicianship by the standards. Fourthly, musicianship is a *productive* form of knowledge. As in all forms of understanding of work, the relevant test of musicianship is the way it “plays out in action in response to the demands and opportunities of the moment” (Elliott 1995, 69). Elliott calls this the *procedural* essence of musicianship, which is equaled to the demonstration of understanding in practical achievement. Fifthly, musicianship is *open*. Like all forms of genuine understanding, musicianship is not an end but a continuous process. “It grows in the ways that a complex web weaves inward and outward. It develops, as each of its five knowledge components mature and interweave with each other” (Elliott 1995, 69). When in the actions, words or sentences in the moment to moment interaction of instrumental lesson, add to the development of skills, ideas, or praxis of music making, the teachers and students focus on musicianship in their activity.

The distinction between the object 1 and object 2 (Table 4.2) is not always clear. The objects of those lessons that I have been observing and analyzing seem to overlap, and they seem to be switching sides constantly. One example of the complexity is bodily experienced music making. Along with Jaques-Dalcroze (and pragmatist theorists such as Dewey and Shusterman), Westerlund and Juntunen (2005) argue that the body is not only an instrument through which musical thinking takes place; the body can be taken as a conscious and explicit object of transformation. The argument refers to musicing and object 2. Yet, Bachmann (1991) argues in her book on Dalcroze that music should be used for personal experience and

in many of the exercises as a means rather than an end itself. This refers to the aesthetical description of object one.

“Object 3”, focuses on another possible reality of music making and pedagogy, which I call musical re-contextualization (Table 4.2). Within the frame of instrumental music lesson, the expansion of musical and pedagogical problem solving sometimes means that teachers and students import and create new musical, pedagogical, and extra-musical elements to the situation. This approach refers to musical and pedagogical engagement, in which the teachers and students jointly generate and create a musical context; context in contexts. The context can be different from the traditional setting of an instrumental lesson; a new context within the outlines of the traditional lesson.

This object emerges out of the tensions that originate from integrating Reimer’s idea that music is a “subjectively felt” experience into the Deweyan idea that music is not *only* a mode of knowledge, but simultaneously being, doing and thinking that brings quality to our lives through all these aspects. For articulating this object, I shall draw on the insights proposed by Westerlund (2002) who points to a contradiction between Reimer’s aesthetic theory and Elliott’s “thinking-in-action” theory. As a solution, she suggests the reality of music education to be considered as a situated, context-sensitive approach, in which the bodily-felt experience, action and culture are bridged. This approach widens the view of music education, from a solipsistic inward subjectivity or individual cognition-based performance to shared musical events. As particular kinds of social realities in educational contexts, the musical events are meant to be “socially enjoyed, collectively created and communally significant” (Westerlund, 2002, 227-229).

Westerlund explains that, “music needs to be constructed out of an understanding of the various links of the music to the larger social-material context of its use; links between this and other more familiar musics; links between ‘our’ context and the other context” (Westerlund 2002, 207). The question is not to mechanically transfer an old “original” context of music or musical conventions into musical production or instrumental lessons. This would mean, for example, stamping the so called “authentic” baroque style into all music around the 17th century, without passion for and understanding of the affects.

In what Westerlund calls ‘multi-musical’ rather than ‘multicultural’ approach in music education, re-contextualization takes effect in elaborating the culture of music education.

Pluralism as part of multi-musical education challenges the educational context and changes its culture. Westerlund (2002) states that

plurality is the way in which to stir up the dialogue between various views (...). If culture is understood to be a suggestion for experience and meaning in contextual action, then pluralism in this respect challenges the educational context and changes its culture. (Westerlund 2002, 204)

In that sense, musical re-contextualization as an object of instrumental music lesson activity has a dialogical unity of musical and pedagogical production and reflection. Therefore, musical re-contextualization consists of possibilities for many kinds of musical ideals and forms of making music, combinations of musical genres and traditions including approaches of improvisation and reflection. These new possibilities refer to the zone of proximal development in teaching and learning practice of musical instruments.

4.7 Mediating tools in instrumental music lessons

In this study, the second type of data gathering procedure for the matrix of social languages is based on processes related to accomplishing the ongoing communicative event with the means of interaction. Talk typically occurs as one of the mediating means for the realization of the actions that transform into an activity. But talk sometimes seems to be an activity of its own right. For instance, Hiruma, Wells, and Ball (2007) prefer the term dialogue rather than the ordinary term “talk”, because dialogue can be taken to include non-verbal as well as verbal modes of communication. However, since the term dialogue is sometimes understood in the restricted sense of being in opposition to monologue, Hiruma, Wells, and Ball prefer the use of “discourse” in order to keep their stance neutral.

Discourse in music is, according to Hultberg (2000), a complex way of communicating musical meaning. It corresponds to the complexity of music itself. Correspondingly, the concept of “musical literacy” (Hultberg 2000, 135) represents the abilities necessary for conveying and understanding musical intentions. Through various forms of discourse in music, the individual is connected to the context of interpreting, improvising, composing or in other ways making music. The sounds appear and exist in the musical contexts of tradition, style, performance praxis, and everything that surrounds it. Consequently, “music making is a collective activity, regardless whether it is done individually or in a group” (Folkestad 1996,

210). The interest in studying music as discursive practice draws upon such a complex background.

Characteristic to this study is the scope of the means of interaction. The instrumental music lesson context includes: the musical, verbal, and non-verbal mediation with mimics and gestures, signs and sounds (see Section 4.2). Terminologically, this study, by using Voice Analysis, refers to dialogue more as a theoretical approach to meaning construction than as a term signifying talk-in-interaction. Respectively, Voice Analysis equates with discourse analysis by focusing on communicative repertoires available in society, and analyzing forms and modes inscribed in cultural conventions. However, by addressing the unit of interaction that takes in and is reflected in dialogicality, Voice Analysis aims at entering into the dynamics and developmental tensions of meaning construction

Each step into music and for a musical performance necessitates the adoption of proper tools. Cultural tools and artefacts representing a tradition are important bearers of meaning. Like Vygotsky, Bruner (1996) describes the crucial function of cultural tools by means of which individuals develop their cultural knowledge. The question is *which* cultural tools individuals use while communicating, *how* they use them and *which parts* of the collective knowledge they master? Vygotsky (1978) distinguishes between material and psychological tools. Material tools are external mediators contributing to individual practical development. Referring to human language and sign systems, Vygotsky identifies these as important psychological tools, internal mediators, by means of which reflection and mental development take place.

More precisely, focusing on instrumental teaching and learning, what kind of mediating tools do teachers and students use in order to accomplish the communicative event? The variety of these tools, modes of communicative activity, in music is complex, because music has its own aural symbol system. Elaine Colprit (2003) found that many teachers choose to communicate musical ideas through modeling, because spoken language may not be adequate to describe what began as an aural idea. Therefore, the messages and meanings in instrumental lessons can be passed on by music within music: musical elements are both targets of the action and the mediating tool. Elements more close to music serve as technical tools and psychological tools.

The point here is the combination of the use of mediating tools. For example, many teachers use imaginative stories or metaphors for achieving relaxed technique or qualitative results in musical expression. The acquisition and application of new psychological tools potentially elevates the level of influence (e.g. Colprit 2003; Zhukov 2004; Gaunt 2006); the result is actually achieved only when the tool, mediated activity and communication, meet each other. The essence of psychological tools is that they are originally instruments for co-operative, communicative and self-conscious shaping and controlling of the procedures of using and making technical tools, including the human hand (Y.Engeström 1987).

For the matrix of social languages, I will suggest three modes of communicative activity, namely, explanation, control, and narrative. These are modes of communicative activity that teachers and students are involved with during the lessons. The suggestions are based on my theoretical readings, my own professional experiences and my preliminary trials with the video-recorded data.

4.7.1 Explanation

The transmission of information by explanation is an essential feature of human communication. When the matters, issues or problems of a subject seem clear, we tend to, for instance, transfer the knowledge by stating it verbally and logically. Teachers explain their ideas about music and life, and students carry on in the same way. In Bruner's (1996) words this is logic-rational or paradigmatic thinking and speaking, consisting typically of formal explanations and descriptions, conceptualization, categorization, general proposition, aspiration for objectivity, seeking for general laws, hypotheses, and substantiation. Hakkarainen (2002a, 197; my translation) argues that this kind of logic corresponds to the idea that understanding is the same as "following the contents of the curriculum". Realization of the curriculum, which can naturally include variation from nation-wide to personal content of matters, is dependent on what things we are able to explain and practise (Hakkarainen 2002a). Explanations can vary from the theoretical and academic to banal and trivial. However, usually explanation as a mode of communicative activity in instrumental lessons uses practical logic, and is focused on technical or musical issues. It uses examples, linear logic, and follows a linear time conception.

Explanation aims at transferring information about music and musical expression. Teachers articulate conceptual details about student performance so that the student learns to make the same discriminations and judgments independently. According to Duke and Simmons (2006), teachers know precisely what they expect to see and hear from the students, which suggests that their vivid auditory images of the repertoire lead to their detecting even the smallest deviations from the images they have in mind. Teachers further ensure that students are making appropriate, independent discriminations by asking them to verbalize those discriminations. Therefore, explanation explicates in form of feedback and descriptions, and by using verbal linear logic images, metaphors, and also non-verbal signs such as mimics, gesture, and modelling.

In an effort to elicit change in students' performances, teachers frequently give negative feedback that is, as stated by Duke and Simmons (2006), directed at improving the quality of recently executed performances. In contrast, when students achieve important goals or independently create musical moments that are stunning to their teacher, the teacher gives positive feedback that clearly expresses excitement about the students' accomplishment. In their study of three renowned instrumental teachers, Duke and Simmons (2006) described that the positive feedback these teachers provided as emphatic and detailed, while negative feedback was "clear, pointed, frequent and directed at very specific aspects of students' performance, especially the musical effects created" (Duke & Simmons 2006, 15)

In all instances in which the teachers demonstrate by singing, gesturing, or playing, they embody the expressive elements of the music while executing the example. Explanation therefore appears in manifold forms of mediation, to inform and clarify the musical and pedagogical points.

The word "explanation" is used in a wide variety of ways in ordinary language — we speak of explaining the meaning of a word, explaining the background to philosophical theories of explanation, explaining how to bake a pie, explaining why one made a certain decision, where this is to offer a justification and so on. According to Carl Gustav Hempel (1965), explanations offer information of *why* things happen. The things in question can be either particular events or something more general — for example, regularities or repeatable patterns in nature.

According to Hempel's Deductive-Nomological Model, a scientific explanation consists of two major "constituents": an *explanandum*, a sentence "describing the phenomenon to be explained" and an *explanans*, "the class of those sentences which are adduced to account for the phenomenon" (Hempel 1965, 247; 2001).

For the explanans to successfully explain the explanandum, several requirements must be met. Firstly, in Hempel's theory, "the explanandum must be a logical consequence of the explanans" and "the sentences constituting the explanans must be true" (Hempel 1965, 248). That is, the explanation should take the form of a sound deductive argument in which the explanandum follows as a conclusion from the premises in the explanans. This is the "deductive" component of the model. Secondly, the explanans must contain at least one "law of nature" and this must be an *essential* premise of the derivation, in the sense that the derivation of the explanandum would not be valid if this premise were to be removed (Hempel 1965).

Paradigms of this sort of scientific causal explanation in music include the explanation for the sound vibration, laws of intonation and instrument specific features, or physical and emotional reasons for successful performance. In instrumental lessons, explanation is usually based on the subjective examination of the personal, musical and instrumental competence of the teacher and the student. Books like "How I Play How I Teach" (Tortelier 1988) or "Violin Playing as I see it" (Auer 1961) articulate the subjective teacher's discourse. The high quality of performances on stage, in class, and in recordings also verifies the explanandum. Explanans, for its part, appears in the lesson discussion and instruction through the concrete musical and technical experiencing on the instrument. By experiencing, the participants subjectively verify the explanation.

Although the various forms of logical transferring of information take place in the lesson interaction with the ultimate purpose of musical and instrumental development and change, explanation remains neutral as a mode of communicative activity in this study. Explanation is neutral in the sense that it supplies and gives grounds for musical and technical elaborations. The information consists of ingredients for developing the artistic perception, and the musical and instrumental awareness supporting reflections in and on action (Schön 1987). Explanation, however, does not aim at direct improvements in musical expression or instrumental technique. Changes and musical initiations may occur by considering the

information, even if the provided *explicandum* never intended to do this. Therefore in this study, the identification of explanation is dependent on the situation: how and for what purpose teachers and students use this mode of communicative activity.

4.7.2 Control

Verbal instructions, explanation, can be and often have the nature of control. This study, however, draws a distinction between explanation and control modes of communicative activity. Explanation states facts and information neutrally whereas control intends to exercise restraint or direction over a person or a skill. In musical performances, artists need to control their emotions, body movements, ideas, style, the musical content, and the context (Davidson 1997). In lesson contexts, the teacher and the student find it necessary to eliminate or prevent the flourishing of bad habits in instrumental technique or musical mannerism (Duke & Simmons 2006). Both explanation and control may aim for such change, but, as a mode of communicative activity, explanation is more indirect as compared to control. Explanation presents the wonder of music and musicianship, but to guide an enthusiastic musician is comparable to controlling the fire of an eager horse. Control is the pedagogical touch, which must be safe, careful, and determined; in other words firm but gentle.

Control as a mode of communicative activity in instrumental lessons has its origins in the aesthetics of the Western classical music tradition (e.g. Louhivuori 1998). The tradition has embraced musical and technical quality, which has the characteristics of pure sound and intonation, exact rhythm, dynamics and note pattern production in the composers' style and in line with the prevailing instrumental tradition. The emphasis on the composer's intentions marked in the score and the instrumental tradition has, quite naturally, supported the master-novice tradition, which guides the novice student to adjust to the tradition and regulates the interpretation. This cultural-historical background of control in instrumental lessons builds on the development of Western individualism, as well as on the institutional and pedagogical understandings, and their influence on the instrumental teaching tradition. Research on instrumental music teaching shows that control characterizes academies of music and instrumental teaching and learning in the Western art music tradition (see Chapter 2). This study specifies further that control as a mode of communicative activity appears in instrumental, rational, social, and culturally sensitive actions (Westerlund 2002).

By referring to the pragmatist view by Dewey, Westerlund states that knowledge is an instrument and a means for the right action, for directing our activity and for helping us to make our plans. This means that “knowledge of musical practice really changes the music” (Westerlund 2002, 70). For instance, knowledge of musical notation and solfeggio are not objects of knowledge as such, but instruments for dealing with the musical material, and for increasing control in producing music. Hence, instrumental musical and instrument specific knowledge is “instrumental in the enrichment of musical experience” (Westerlund 2002, 68).

The rational control in this study does not imply that reason is a means for distancing and disengaging oneself from the bodily felt or experienced music making. Such ideational musical world was evident in the thinking of Descartes (Westerlund 2002, 101). Rather, the experiencing through music by an instrument is the source of information, by which the rational evaluation, adjustment to rules and elaborations are possible. It is generally acknowledged that instrumental teachers have highly varied and individual approaches to their teaching – in fact, this is seen as an important aspect of their artistic individualism and is enthusiastically endorsed in the institutional culture of the academy (Kingsbury 1988). Such variety has, however, largely been understood as an aspect of how the teacher as a rational agent deliberately chooses and controls his or her pedagogical actions.

Control is also social. This means that in the educational community, dominant norms and expectations regulate the activity (e.g. Westerlund 2002). When the participants embark upon their efforts as teacher or student, they assume pre-existing positions that are provided by and offered to individuals within the activity system of instrumental music education. Inscribed in these positions are certain rules, standards, and expectations related to what it means to be a musician, teacher or student in this particular educational context (Nerland & Hanken 2002). The positions of teacher and student are thus institutionally regulated in the sense that the rules of behavior are shaped and sanctioned by the institutional culture in which the teaching-learning activity takes place. Nerland and Hanken (2002) state that little attention has been paid to how different strategies of teaching are activated from cultural systems of meaning embedded in the institutional settings and the traditions of the instrument, or to how these systems of meaning position the participants in certain ways and regulate the opportunities for learning that are made available to the student.

Moreover, control is “culturally sensitive” (Westerlund 2002, 44). Culturally, the organization of the instrumental music educational programs centers on the teaching of the principal instrument. This activity is often organized as one-to-one interaction and situated in an apprenticeship-like relationship between the student and a distinguished performer of the instrument within a formal institutional context. In such settings, cultural rules guide and shape thinking and the search for meaning. By direct instruction or informal experience, we become sensitive to our musical environment, whatever it might be. This means that culture and the meanings related to it are not social abstractions or contents that are poured into us via socialization as such, but rather, they are a set of control mechanisms. Culture does not offer meaning in an essentialist sense but rather suggests and persuades us to become more aware of the consequences of certain particular choices and simultaneously less aware of others.

Thus, the manner in which instrumental teachers carry out their teaching – and how music students proceed with their practicing – becomes a determining factor for the learning and educational outcome. Despite the individualized organization, teaching practices, such as control, are highly institutional in their character. Teaching is heavily grounded in the historical practices of music performance. The teachers' and students' close ties to the professional community of music, the ubiquitous presence of musical works in the teaching-learning situation, and the authority given to the performance traditions of diverse instruments all contribute to making music lessons an arena for the maintenance of particular cultural practices. For instance, when working on a particular repertoire, students and teachers alike become “steeped more deeply in the traditions of the particular community of musicians” who have embraced this body of knowledge as a collective norm (Froehlich 2002, 155).

In musical and pedagogical interaction, both tools and signs construct a complex control system. Control may be carried out by touching or pointing as well as by conducting musically or by playing in turns or along with the student. The players may control each other or themselves by listening, or by verbalizing; using musical, pedagogical, or instrument-related technical terms and concepts. Madsen, Stanley and Cassidy (1989, 86) state that “teacher intensity refers to sustained control of the student/teacher interaction with efficient, accurate presentation and correction of the subject matter combined with enthusiastic affect and pacing”.

Finally, for examining Intensity of Interaction it is relevant to consider how teachers and students perceive control. Does control as a negative effect reduce freedom in musical expression or learning? In other words, is freedom the opposite of control? Based on the above definitions, control does not imply involuntary or forced actions. Research has found that teachers and students considered adjustments to technical and musical domain-specific rules as the most beneficial choice the tradition offers in instrumental development (e.g. Rostvall & West 2001; Kuusela 2002; Zhukov 2004; Gaunt 2006; Duke & Simmons 2006).

Moreover, a highly defined structure of a lesson or musical context can be liberating. Eisenberg (1990) states that by constraining the range of musical and behavioral choices available to the players, the structures enable collective musical innovations. He refers to jazz contexts, in which the non-disclosive relationships between players, organization of the music and the situation set a clear system of rules. This notion of structure includes both formal rules and informal ones: musical structures, keys and symbols represent the formal rules, and timing with situational agreements represent the informal rules. Behavioral norms, division of solos or roles while playing, and communicative codes like eye contact and hand signals, represent social practices in the structure. A well-defined and often relatively simple backdrop of rules and roles makes the improvisational freedom possible.

In this sense, relying on the basic rule and role structure, the players set up interesting possibilities for the others and keep the action going. Following Gadamer (1988),

the attraction of the game, which it exercises on the player, lies in this risk. One enjoys a freedom of decision, which at the same time is endangered and irrevocably limited (Gadamer 1988, 95).

Too much attention to the rules, however, raises concerns of ego and increases self-consciousness. Only when this layered rule and role structure becomes taken for granted does control facilitate freedom in expression (Eisenberg, 1990).

4.7.3 Narrative

Since production of musical expression often escapes logical explanation, concrete facts, and direct verbalizations, musicians tend to use metaphors and stories as means of mediating meaning. Similarly, communication in instrumental lessons often functions through metaphors and stories. Therefore, narrative comprises a special and distinctive mode of

communicative activity of a lesson. According to Bruner (1986), narrative has three intertwined emphases: narrative is (1) storytelling, (2) a condensation of life, and (3) a personal and social identity project.

Firstly, only poetic language can reach the archaic meaning schemas or psychosomatic expressions, typical to music, like sighs, groans, expressions of sadness or leaps, from which spring the meaning of hope. In general, Hakkarainen (2002a) expects stories to play more an important role in learning and in comprehending things than people think. He highlights narrative as the most effective way of formulating meanings through creating and composing stories. As such, a story reaches all sections of learning. In the light of Intensity of Interaction, the exchange of stories between teachers and students can create a shared understanding and bring the mental models of their worlds closer and make comparisons possible.

However, telling stories is not just repeating the happenings in oral form. The stories always include creativity and rearrangements of the world. According to Bruner and Lucariello (1989) the experience, couched in stories, has five features. (1) The stories are logical; (2) The events occur in a meaningful order; (3) There are natural and unnatural elements to them; (4) The point of view of the teller is brought out in a story; (5) The sequence of events is mediated by the story. Bruner (1986) emphasizes the potential of play and stories in the creation of roles and possible worlds, to which the teller constructs her or his own relationship. A story is always multilayered, which leaves space for different interpretations on thinking of, for example, a child. It is always interesting what the story tells us about the narrator.

Making music as such can be seen as storytelling in the sense of immersing in a different world. In Bruner's (1986) words, the form of narrative use of language refers to possible meanings and possible worlds. Therefore, it seems arguable to assume that using narrative as means of involvement and motivation potentially intensifies the interactive process of an instrumental music lesson. We understand phenomena by forming a story. Knowledge is taught and learned at the same time as tales are produced and analyzed. According to Nadine Nehls (1995), the metaphor of a tale is common to the appearances of different narrative pedagogies. The lived experiences of teachers and students define narrative pedagogy as an approach to thinking about teaching and learning. As a pedagogical approach the use of tales

is bound to the subjectivity of knowing. In this kind of pedagogy, truth is relative and it is constructed in a social process.

Secondly, Bruner (1986) viewed a narrative as a condensation of life and endowed a special status upon the story as the unit of analysis for psychological development. For him, narrative was a symbolic schema through which a child interprets the world. Narratives describe and organize the world in which the child lives and acts. This function covers both the inner and the outer world. Narratives and narrative learning come very close to an individual child's personal experiences and sense making. It is through the analysis of their play and narratives that adults can gain insight into their world, including their academic development and learning.

Often, examination of stories focuses on their substance: how exactly or aptly the child retells the story. Hakkarainen (2002a) points out that the creative and aesthetic part has in such cases been left aside. Experience-based storytelling, on the other hand, mediates a picture of the inner world and development of the creative process of a person. From this point of view, it is interesting how the experience and emotional experience of the narrator is mediated to the listener and reader. Narrative is an "emotional identification process, where realities and imagination face each other" (Hakkarainen 2002a, 75).

Narrative includes personal attitudes, perspectives, and experiences that often take part in the musical and pedagogical meaning construction. In my experience, the music teacher and student often take up and go beyond their own life stories. In musical master-novice settings, the personal stories of the teacher and student inspire and direct the situation. The vivid presence of the participants enables the interaction, of which the expressed experiences are the concrete material for transferring musical and pedagogical meanings. In this way stories mediate the viewpoint and meaning of the teachers and students as storytellers.

When stories become a vivid part of the teaching and learning context they seem to radically influence the interaction. Narrative learning, according to Nadia Nehls (1995), enables a new kind of partnership between the teacher and the student. For example, by changing roles, the teacher shifts from an expert or tutor to a participating learner. While at the same time the student may take the position of an authority. According to Nehls, this flexibility of roles often creates more reflection between the student and teacher. Moreover, through connecting practice and theory, narrative learning creates new kinds of communal

learning, in which the learners take and share responsibility. This motivates in obtaining tools for developing the practice. Nehls (1995) points out that using narrative also stimulates thinking: absorbing, analyzing and synthesizing a written or heard story makes conscious learning possible.

Thirdly, following Bruner's idea of narratives, teachers and students build their identities through stories. Musicians, particularly students, studying any musical instrument, build up instrument-specific identities. The inner story of expectations and beliefs develops through enormous amounts of work and practicing, by which they earn acceptance in their social relations. Moreover, the musical and pedagogical community supports and encourages such endeavors by communal model stories. The model stories of a community or an institute maintain the collective identity (Ylijoki 1998). The communal model stories are not stable, clearly narrowed, consciously adopted or shared by all. They change by time. They are educative. They tell us what is valuable, what is contemptuous, what is right, how we should act, and what to avoid. They mediate basic beliefs, norms, and values of the culture of the organization. The educative action is directed by the model stories. They include formal and informal regulations and moral systems of the activity (Polkinghorne 1988; Ylijoki 1998).

The transformation of the communal model story into a unique inner story can be seen as a personal identity project (Hänninen 1999). A successful identity project presumes the publication of the adopted and transformed story. Because of the public nature of a story, a narrative is always under social assessment, control, and negotiation. Thus, according to Hänninen (1999), narrative is the structure of a story as a whole told by a person.

Consequently, in situations such as instrumental music lessons, narratives offer rich and endless possibilities for transferring musical and pedagogical meanings. This calls for increasing but also careful use of narratives in music education, since narratives provide such a powerful means for transferring not only musical knowledge but also values, attitudes, and opinions. The description above on stories, metaphors, identities, perceptions and so on suggests the possibility of more than one category of identifying narrative. However, for the purpose of analysis in this study, narrative, as mode of communicative activity, covers them all.

4.7.4 Combination of mediating tools

From the perspective of Intensity of Interaction, the three modes of communicative activity have quite different qualities, and yet, they support each other in various combinations. Metaphorically, as explanation presents the beauty or structure of music and musicianship, explanation conceptualizes the beauty of a horse, the movement and character of the animal, and how to ride on it. Following the metaphor, to control the enthusiastic musician is like guiding the fire of an eager horse, whereas narrative sets the fire and stimulates the horse.

Respectively in the flow of instrumental lesson interaction, the modes of communicative activity conceptualize, guide, and stimulate the passion for music and music making. The varying combination of the use of mediating tools follows the intentions of the parties. In other words, the choices of modes of communicative activity reflect their volition to attain understanding. Sometimes this process is in line with the standards or habits of musical and pedagogical communication. However, as any buoyant process, the interaction of a teacher and student is not always harmonious flow of reciprocity. The lesson interaction often has expected and unexpected deviations. Connected to the previous discussion on contradictions in Chapter 3, tensions of interaction is the topic of the last section of this chapter.

4.8 Tensions and contradictions of musical and pedagogical interaction

In order to identify internal contradictions and tensions within everyday interaction there has to be a conception of a normal, planned, or traditional script. A script refers to an overt or a covert plan, norm system, or tradition (Engeström, Y. 1995). It could be described as a historically developed artifact that has a rule-like character: scripts “codify and regulate standard procedures in repeatedly occurring cultural situations”, and even though they may be explicit, participants often do not recognize the one they are following (Engeström, Y. 1992, 79). A script could be a phased description or an instruction of how things are going to happen from the beginning to the end, including the division of roles and the expectations of the participants. In cognitive psychology, a script is a kind of schema in a person’s mind of how things proceed. However, in the context of collective work processes this is not enough: a script emerges and exists in interaction with the working community rather than in one person’s mind.

The one-to-one form of lesson interaction in particular follows a quite stable script. Research on instrumental music education (e.g. Yarbrough, Price & Hendel, 1994) has found that instructional efficiency presumes systematic use of sequential patterns in lessons and rehearsals. As a result, such teaching and learning strategy as a script remains obviously rather rigid.

Mehan (1979) identified a typical lesson structure, which he described as an I-R-F structure: initiation, response, and feedback (see also Gutierrez 1995). Usually, the teacher initiates a question, a student responds to it and the teacher gives feedback. There is also a repetition type of script, by which teachers present talk or texts and the students repeat them. The repetition or imitation script through sequential patterns (e.g. Yarbrough, Price & Hendel, 1994) has a long and successful history in instrumental music education and seems to have quite similar features throughout the Western music education tradition. The script of the instrumental music lessons usually follows a route, in which the teachers take the initiative, ask questions, listen to the students playing, and give advice, analysis, or criticism on the performance (e.g. Yarbrough, Price & Hendel, 1994).

For example, in the European conservatories, the lesson script based on the elaboration of learning objectives and the curriculum has been under pressure of change. The development of students' ownership and activity in their learning has been discussed recently, for example, in Scandinavia and UK. This has effected changes of curriculum and in organizing educational systems. Therefore, Teräs (2007) emphasizes that the teachers' work in general has changed from only teaching to include, for example, developing, fostering, and negotiating in networks. In the most extreme form of this development, the question arises whether the teacher teaches script has become outdated. The students' studying script has changed as well along with, for example, "You Tube" and other internet services. Students are not passive receivers nor consumers of world wide information anymore.

Above all, the teacher-student work, particularly in instrumental lessons, is "moment-to-moment judgements about the quality and direction of student's musical thinking-in-action" (Elliott 1995, 282). A strategy of moment-to-moment judgements is what Elliott (1995, 282) suggests as means for what students require to bring their musicianship into line with a given challenge and, coincidentally, with what students require to stay centered in the musical "flow channel". The script of such ongoing musical and pedagogical process including mutual

attempts, suggestions, and variations in musical expressions and problem solving may turn out to be rather unexpected or cryptic.

The breaks in the script, disturbances such as interruptions or student initiations, inconsistencies or deviations from the script are in the focus of the Method of Voices. The activity theoretical point is how the participants produce and deal with the emerging tensions. Disturbances in the script are, according to Y. Engeström (1995, 65), visible “dis-coordinations” in the flow of work and interaction within the work. They are involuntary deviations from the script. Engeström explains that a person initiating a disturbance may be more or less aware of his or her attempt. Disturbances of human interaction typically appear as problems of understanding, differences in opinion, interceptions, and objections. As a marker of a disturbance, negatives like “no” may emerge in the conversation. Non-verbal signs, for example, gestures, mimicry, and movements expressing unrest also indicate disturbances. Sometimes disturbances can be identified as silence and passive behaviour. These features indicate breaks, blocks, or gaps in the flow of information and understanding. Sooner or later, breaks often lead to the opening of disturbances, misunderstandings, and dissonances.

Another deviation takes the form of a dilemma. Dilemmas are contradictions impacting the action, speech, or thinking of an individual. Dilemmas appear as hesitating, reserving, wavering, contrasting statements, and even arguing with oneself using clumps of words like “but” and “no” (Engeström, Y. 1995, 66).

Innovations are more or less conscious initiations to transcend boundaries of a script in producing a new kind of idea or solution. Usually other members of the activity have to echo and agree with the innovative suggestion, in order to put an innovation into practice. A new tool or procedure objectifies a successful innovation. However, sometimes it is difficult to make distinction between innovations and disturbances. Both are deviations in the script. Consequently, a suggested innovation can be seen as disturbance, while a disturbing situation may lead to an innovation. Y. Engeström (1995) points out that in an analysis the most important point is not so much to draw a strict line between disturbance and innovation, but rather, to recognize the innovative potential of disturbances.

In sum, this section has drawn on the understanding that contradictions and tensions of interaction externalize as deviations of the maintained script. They have social, cultural, and

reciprocal origin. On the one hand, a stable and solid script of an instrumental lesson may support long-term elaboration of skill training and musical competence. However one can ask, does the music performed by artists, whose musicianship has grown mainly within a stable educational script, reach the audience? On the other hand, an agenda for a lesson with creative methods and ideas may appear as a new and also unclear situation, which is open to disturbances. As stated above, these disturbances have the potential to also become innovations with artistic value. Sometimes, however, too many disturbances may obstruct steady learning and development. Obviously, as a starting point of this study, these two extreme perspectives in instrumental lesson interaction seldom appear as such. Moreover, this study expects that the stable script and disturbances of interaction do not exclude each other; both perspectives are beneficial for musical learning

As outcomes of the Voice Analysis, this study attempts to identify and demonstrate the activity-based disturbances appearing in the data. The following chapter (Chapter 5) explains the design of the process of the current investigation. The exploration of Intensity of Interaction through musical and pedagogical meaning construction connected with intensity ratings necessitates adaptation and elaboration of specific methods of data collection, analysis, and description.

Chapter 5

Data collection and research methods

The approach of this study involved two interrelated angles of analysis, one focusing on intensity as perceived by the participants, and one focusing on meaning construction (musical and pedagogical contents as objects of activity, modes of communicative activity, and means of mediation). These angles included the individuals within the collective, how they adopted what was constructed at the collective level, as well as how they used these musical and pedagogical resources in subsequent events. Each angle was the primary focus at the time being, however, these angles were complementary. The angles of analysis contribute to a part-whole relationship necessary to obtain a fuller understanding of the interrelationship of meaning construction and Intensity of Interaction. The intention was to examine dynamic changes and tensions within the lesson interaction, and to create understanding and practicable concepts beyond the particular level through constituents of instrumental teaching and learning.

5.1 Data and data collection

The primary data source of the current research comprised 22 instrumental music lessons and their teachers and students: fourteen (14) violin, two (2) vocal, one (1) flute, and five (5) cello lessons. Participants included seven (7) teachers and eighteen (18) students: six (6) female teachers and one (1) male teacher, seven (7) female and eleven (11) male students. With the exception of only one teacher, most participating teachers were represented more than once in the data; six students also participated only once. Three groups of the violin lessons (L1-L4), (L5-L8), and (L9-L11) had the same teacher and student, whereas the three other violin lessons (L12-L14) and the vocal lessons (L15, L16) had the same teachers but different students. All cello lessons were group lessons and the amount of students in the cello group lessons differed on each occasion; however, these lessons all had the same teacher. An overview to all the lessons examined in this study is presented in Table 5.1 (see also Appendix 1).

Description of the lessons										
Lessons					Participants					
					Student(s)				Teacher	
Lesson	Recordings	Dur (min)	Instr	Format	Age	Years of learning	Sex	Education/ Level	Sex	Institution
L1	16.9.2004	22	vl	one-to-one	13	7	F	Music school/ basic	F	Music school
L2	30.9.2004	21			13	7				
L3	9.12.2004	23			13	7				
L4	5.5.2005	24			14	8				
L5	19.11.2004	30	vl	one-to-one	16	9	M	Music school/ basic	F	Music school
L6	16.4.2005	56			16	9				
L7	1.2.2006	35			17	10				
L8	13.4.2006	51			17	10				
L9	12.12.2006	30	vl	one-to-one	14	7	M	Music school/ basic	M	Music school
L10	19.12.2006	26			14	7				
L11	23.1.2007	40			14	7				
L12	28.9.2006	37	vl	one-to-one	22	16	F	Higher education / professional	F	University of applied sciences
L13	2.10.2006	7			6	0.5	M	Preparatory/ beginner		
L14	12.10.2006	41			21	15	M	Higher education / professional		
L15	4.12..2006	55	voc	one-to-one	24	6	F	Higher education	F	University of applied sciences
L16	4.12.2006	37		one-to-one	23	5	F	Higher education / professional		
L17	6.2.2007	62	fl	pair	21/ 20	11 to 12	F / M	Higher education / professional	F	University of applied sciences
L18	28.1.2006	16	vcl	group (6)	4-5	0,5	M	Preparatory/ beginner	F	Music school
L19	4.2.2006	32		group (4)						
L20	18.3.2006	26		group (5)						
L21	1.4.2006	24		group (7)						
L22	22.4.2006	24		group (6)						

Table 5.1 Description of the lessons

The age of the students in this study ranged from four to 24 years old. Based on the age of students, the lessons naturally fell into three distinct categories characterized by different

level of musical and instrumental development: preparatory/beginner, music school/basic, and higher education/professional. This categorization offered varied perspectives for the lesson interaction. The cellists (L18–L22) were at the age of four and five and one violinist was six years old (L13). The violinists in the lessons L1 to L11 were at the ages between 13 and 17 studying the basic elements of instrumental technique and music. Students over 20 years old studied professionally: two violinists (L12 and L14), two singers (L15 and L16) and two flutists (L17). They studied at different levels within the institutional music education system that follows the nationwide, goal-directed curriculum (Opetushallitus 2002, 2005; Tammissalo 2005). The lessons had structured variations such as cellos in a group, flutists in a pair, and others in one-to one lessons (Appendix 1).

The investigator videotaped all the lessons, which varied in length from 7 to 62 minutes. The time period for observation and recording of these lessons was from the autumn of 2004 through early spring of 2007. Lessons 1–3, 9–11, and 18–22 followed each other in a relatively tight timescale, whereas one and a half years were required to record lessons 5–8 (Appendix 1).

The lessons were carried out in their normal weekly schedule. I discussed various topics with the teachers, about their students, the music they were playing, the expectations of the research, and the most convenient timing of lesson observations. The lesson recordings took place after the permission of the students and at the agreed time and place. The practical arrangements were, therefore, somewhat improvised according to the convenience of both teachers and students. The participants and I decided together the next recording date and time, usually after the previous observation, and organized the recordings according to the circumstances of each learning situation. Therefore, each series of lessons under examination had a unique time schedule (see Appendix 2), which seemed most appropriate for ensuring minimal intrusion into the ongoing musical and pedagogical process. From the beginning, the teachers and students were asked to behave normally, and not to act or present something extraordinary for the recordings.

In lessons L1–L4 the violin student played the sautillé bow exercises at a lesson (L1) for the first time in her life. She accomplished a performance of the *Moto Perpetuo by Böhm* in a concert (9.12.2004), in which she applied the sautillé bow stroke. The performance was

recorded for this study. I also recorded the *Telemann sonata*, which they prepared for an entrance exam.

In lessons L5–L8 the participants prepared the *Mozart Adelaide* and the *G-major concertos* and also the *Wieniavsky Legend* for auditions. In lessons L9–L11, the boy performed the *Sonata by Vivaldi* after one lesson (L10). In the violin lesson (L12) and vocal lesson (L15), the students prepared for an exam concert and the recorded lesson was the final stage of the preparation.

The flutists in the lesson L17 were preparing orchestra solos by different composers for an exam, and were in the middle of their audition preparations. The recorded lesson in this case was part of a continuing process, including several opportunities for learning. The five cello group lessons, however, were during a five month period of work in the spring of 2006. This time scale culminated in a concert, which was at the end of May.

In order to respect the holistic starting point of this study, the video recordings included the entire session. The recordings covered teacher-student work from the introductory chatter to final remarks, instead of selecting *a priori* certain parts under the focus of this examination and implying some pedagogical propositions. This study at this point sought to avoid such prejudices.

5.2 Stimulated interviews with Intensity ratings

Videotaped instrumental music lessons and their transcriptions, including the speech and actions of the parties, provided primary data. Based on this data, the stimulated recall interviews were conducted together with the teachers and students (R. Engeström 1999b). During these interview sessions, the participants watched the video of the lesson and reflected verbally on their work and the process of interaction. For this reflection, the researcher provided a written transcript for every teacher and student. The teachers and students filled in intensity ratings on the transcripts (see Appendix 3).

To examine the perceived meaningfulness of their communication, I asked the teachers and students about their views and impressions of the interactions. In order to provide focus to these subjective and spontaneous descriptions, the participants wrote down ratings of intensity in terms of percentages at the same time they watched the videos (see Appendix 3). Besides marking the transcripts, the point of this exercise was that many important insights

could be made as the participants freely discussed questions concerning their interaction and intensity ratings.

Participants were asked to indicate intensity ratings between an ideal maximum and minimum considering their own potential. By potential, I refer to teachers' and students' judgment of their ability or energy to participate in the present situation versus their ability to participate in a situation under optimal circumstances. Therefore, a high number may be taken to mean that the parties in the lesson were maximizing their musical or communicative potential. Similarly, most of the expressive potential was perceived to be momentarily still available, when the participants indicated low numbers. Thus, the participants' subjective interpretation of their part in the interaction was at this point in the interest of this study.

Persson (1996) conducted a study with an approach that resembles this use of intensity ratings, in which he asked the teacher and the students: Who takes the initiative during the average lesson? In order to compare the different impressions and claims of the individuals participating in the study, Persson ended up with lists of percentages. In his study, for example, Mrs White, the piano teacher, divided the initiative between herself and the students on a 50:50 ratio. The average percentage allotted to Mrs White from the students was 64 per cent, while the students estimated their own active participation in the lessons to be 36 per cent. These measures illustrated their interactive activity. The numbers expressed in a percentage indicated their estimations of the degree to which they felt that they were normally taking an active part in the lessons.

In contrast to Persson's figures, the percentages collected in this study by intensity ratings illustrate a series of estimations of specific moments during the transcript. The percentages follow the course of the lesson interaction. Another distinction is that intensity ratings are not dependent on the other participant's figures at the same lesson. The numbers given by each participant (teacher, student, observer) in my study were interpreted as unique perspectives. They do not exclude each other, but putting them into dialogue produces a new perspective from which to consider the present actions (R. Engeström 2008).

The point of using these ratings was not so much to explain the reason or the cause of the perceived intensity. Rather, the ratings represented subjective interpretations, which were accepted as such. I was interested in how music teachers and students saw, heard, and felt the communication. The ratings were illustrative numbers of teacher/student and observer

perceptions, which were still true, legitimate, and concrete in context for each person in the study. The context for each party consisted of variables, such as personalities, personal life situation, history of musicality and musicianship, and working habits. Such features, for example, in the history of musical engagement of the teacher, student, and observer gave grounds partly to their interpretations of the lessons.

Writing down intensity ratings and commenting verbally on the video was part of the stimulated reflection. This technically quite simple subjective rating task aimed to offer a concrete tool to stimulate further thinking and discussion. According to Rostvall and West (2001), discussions in the stimulated recall interviews of instrumental music lesson research have been problematic. In the stimulated recall interviews of their research, the participants shared only a few comments, which in fact were mostly defensive by nature. As a conclusion, Rostvall and West decided not to use the stimulated recall interview technique at all in their data collection. Intensity ratings, however, are a tool which focuses comments on the interaction process whereby the participants have been active members. In Vygotsky's (1978) terms, this is an example of dual stimulation. Dual stimulation is a method in which the activity has two objects: the problem solving as well as the tool used for it.²¹ As an outcome, the activity of reflection and the intensity ratings in stimulated recall interviews aimed at externalizing and cementing the series of comments.

To open the discussion, I usually asked questions about participants' conceptions of their interaction during the lessons: What kind of interaction did you have in the lesson? Why did you feel the way you did? Why did you give this number at that particular moment? The questions also invoked discussions concerning the intensity. Issues included: What does Intensity of Interaction mean in general and for them? How did they perceive their interaction? How was the interaction in the lesson in your opinion? What percent would you say the intensity was in the interaction of this lesson? I wanted to know how they felt about their communication and how they reacted to the lesson interaction as they watched the video. The point was to raise questions concerning the characteristics of their interaction, while I gathered valuable comments for sharpening the focus of my research. The discussions in the stimulated recall sessions therefore covered both the quality of their own work and the

²¹ Dual stimulation occurs when participants are facing challenging new situations with new tasks. The tasks of problematic situations faced at work comprise the first type of stimulation, while the auxiliary means of conceptual models representing the work constitute the second.

dynamics of their communication in the lesson. These perspectives of the intensity ratings offered limitations, definitions, and specifications for the interpretation process.

5.3 Course of the data collection

The different settings of the stimulated recall sessions were necessary due to the quite different timetables, situations, ages and maturity of the participants. Therefore, in order to respect the wishes and situation of each teacher-student relationship, the study aimed at a case sensitive method in data collection. The detailed timetable of the recordings and stimulated recall sessions will be discussed in Chapter 6 (see also Appendix 2).

In the stimulated recall sessions, the intensity ratings and comments by observers offered a third view of interaction in the lessons. The table 5.2 depicts the diverse settings in which the stimulated-recall interviews took place.

Lesson	Observer (besides participants)	Setting of the Stimulated Recall
L1- L4	Teacher from L5-L8	Teacher and student alone / Teacher with observer
L5, L7, L8	Teacher from L1-L4 and L9-L11	Teacher and student alone / Teacher with observer
L6	None	Teacher and student alone
L9-L11	None	Teacher with student
L12	Student from L14	Teacher alone / Student with observer
L13	Students from L12 and L14	Teacher alone / Observers
L14	Student from L12	Teacher alone / Student with observer
L15	Teacher from L17, Student from L16	Teacher and student alone / Collaborative stimulated recall with teacher and students from L15 and L16
L16	Teacher from L17, Student from L15	Teacher and student alone / Collaborative stimulated recall with teacher and students from L15 and L16
L17	Teacher from L15-L16	Teacher with observer / Students alone / Collaborative stimulated recall with teacher and students from L17
L18, L19, L21, L22	Two students from a vocational school / Parents	Teacher alone / Collaborative stimulated recall with teacher and students / Parents together
L20	None	Teacher alone / Parents together

Table 5.2 Variation of the observers and settings of the stimulated recall interviews.

All of the participants watched their own lessons. Only the children in lessons L13, L18-L22 did not watch, comment or rate their interaction due to their premature age for this kind of assessment. Most of the observers were teachers or students from other lessons examined in this study. Students, other than participants of the videotaped lessons, observed lessons L18, L19, L21, L22.

The interview sessions were audio recorded and transcribed. The transcript content doubled or tripled in many cases, because it was appropriate to organize several stimulated recall interviews per lesson. This was due to practical reasons, such as finding a suitable time and place. In these sessions, the participants watched the videos both separately and in some cases together. They gave and shared intensity ratings and comments at the same time. The cello students and one violin student (L13), however, were so young that only the teacher and the parents were asked to watch the videos and comment on them.

Altogether, the data of this study consist of primary videos of the lessons and the recordings of the stimulated recall interviews with their transcripts and intensity ratings. The study resulted in a large amount of data. The total duration of the recordings of the 22 lessons is almost 12 hours (11:53:17) (see Appendices 1 and 2). The transcribed material included the verbal and non-verbal interaction of both teacher and student(s), the stimulated recall interviews with both parties, and also the reflective conversations with colleagues and parents (see Appendices 1 and 9).

Table 5.3 sums up the course of data collection.

Course of the data collection			
Phases	Time-scale	Implementation	Archived Data
1. Phase	16.9.2004- 15.10.2007	Permissions for lesson observations and settling of timetables	22 lessons visited and Observations within three-year time period
2. Phase		Observing and recording the lesson	About 12 hours of video recordings
3. Phase		Transcribing the lesson interaction word-by-word and action-by-action	Prints of dialogue and actions during lessons
4. Phase		Watching the video, separately, with students or teachers, mixed student and teacher, and observers; writing down intensity ratings	Intensity ratings on the prints
	Audio recording the comments and discussions during the stimulated recall interviews	About 20 hours of audio recordings;	

Table 5.3 Course of the data collection

During the course of the data collection described above I made use of research notes that provided material for the analysis.

5.4 The process of analysis

The analysis viewed the data from two parallel perspectives on the lesson interaction. One line was the interpretation of the intensity ratings, the experienced meaningfulness of the musical engagement. The other, was the analysis of the meaning construction in the lesson activity. By combining these two empirical sources of information, the analysis aimed at providing maps of musical and pedagogical meaning construction for each lesson (see Appendix 6). While the maps encapsulate details of the lesson interaction, they also demonstrate an overview of the lesson structure (see also, Green et al. 2007). Within the framework of the Activity Theory, this study aimed to create understanding of the developmental dynamics within the lesson interactions in order to rethink instrumental pedagogy and improve its practices.

5.4.1 Layers of analysis

This study engaged in analysis at different levels, each focusing on particular sets of actions, making it possible to uncover layers of co-occurring constructions by members (Table 5.4).

The first layer of analysis in this study consisted of gathering, illustrating and understanding perceptions of the participants. To unveil their conceptions and interpretations, as highlighted in Section 5.2, the study provided information through intensity ratings: the teachers and students scored numbers of percentage on the transcript indicating how meaningful they perceived the lessons interaction.

Intensity ratings offered a concrete tool for the participants in focusing their observations and interpretations while watching videos in stimulated interviews. Furthermore, their comments and discussions provided additional information on conceptions, beliefs, expectations, and background knowledge of the participants, as well as on their mutual relationships and about the lesson activities.

Layers of Analysis				
Layer	Mode of Analysis	Implication	Object of Analysis	Archived Data
1. Layer	Intensity ratings with comments and discussions	Structuring the transcript into episodes	Perceptions of the participants and observers of the interaction	Graphic illustrations of the ratings
		Stimulating the recall of the participants	Teacher-student interpretations of their attendance and energy in relation to each other	Charts of the illustrative numbers and their comparison (DAI and Amplitude)
2. Layer	Voice analysis	Defining the objects and means of communicative activity	Interpretation of teacher, student, and observer perceptions with the voice analysis	Preliminary sketch maps of the lesson interactions
				Illustration of the social languages by numbers
3. Layer	Combinations of intensity ratings and social languages	Structuring the transcript into episodes, sections, and segments	Identification and analysis of the teaching and learning strategies in relation to Intensity of Interaction	Combined sketch maps of the lesson interactions
		Providing transcriptions with intensity ratings, modes of action, objects of lesson activity, and musical and pedagogical contents		
4. Layer	Segmental overview of the lesson communication	Defining Intensity of Interaction	Features and character of the dynamic changes within teacher-student work in relation to Intensity of Interaction	Tables with examples extracted from the data
5. Layer	Transitory activities as interpretative framework	Connecting musical and pedagogical sense making and Intensity of Interaction	Sense making and meaning making during the lessons within episodes	Completed sketch maps of the lesson interactions

Table 5.4 Layers of analysis

As an illustration, the matrix of intensity ratings contributed for accuracy. However, comparisons of the lessons were not the purpose of the analysis, because the ratings were local and situational interpretations. The focus of the illustration was the difference between the ratings of the student and the teacher or the observer: Distance of Average Intensity ratings (DAI) and the distance between the highest and lowest ratings (Amplitude). These ratios will be demonstrated in detailed manner in Chapter 6. At the first layer of analysis, they offered condensed information of the teacher-student interaction during each lesson.

The second layer of the analysis focused on the substance and means of communication during the lessons. The transcripts of the lesson transactions offered a raw material consisting of a word-by-word and action-by-action database. For the analysis, this study applied the principles and solutions of the Method of Voices (see Chapter 4) and elaborated its own matrix for analytical purposes. The applied social languages framed the form and content of interaction within an instrumental lesson: objects (musicianship, musical, musical re-contextualization, and their combination, musicianship + musical) and modes of

communicative activity (explaining, controlling, and narrative) sufficiently explicated the musical and pedagogical meaning construction of the empirical data.

The third layer of the analysis combined the two previous analytical approaches. This analytical phase required restructuring the data into three kinds of units of analysis: episodes, sections, and segments. This variety of units resonated more eligibly with the teacher-student meaning construction than merely using episodes. As a result, this combination offered an interpretation that defined and demonstrated Intensity of Interaction within activity of each lesson. Moreover, this analytical process provided the study with an overview of the teaching and learning strategies adapted in the lessons.

The fourth layer of analysis depicted Intensity of Interaction in three kinds of segmental dynamic character. The analysis connected the empirical characterizations with the sustained, strengthened, and diminished segments of Intensity of Interaction.

The fifth layer of analysis applied sense making framework in educational and playful activity elaborated by Hakkarainen (2002) as an interpretative approach for grasping the connection between musical and pedagogical sense making and Intensity of Interaction. In the examined lessons the teachers' and students' actions were viewed as transitions between activities of role play, narrative play, and knowledge searching. At this layer, the analysis focused on objects of the transitory activities.

5.4.2 Units of Analysis

To proceed with the analytical process, the added dimensions provided by the secondary data called for consideration, at each layer of analysis, of the proper division of units from the raw material, the primary data. The empirical unit for analysis of meaning construction, in R. Engeström's (1999b; Chapter 4) study on doctor-patient conversations was an episode. These episodes were not found formally; but as constructions of individual actions and operations. The "voices" of the participants, were analyzed in each episode with the help of a matrix of "social languages".

This study adapted the Method of Voices for its analysis of musical and pedagogical meaning construction. Therefore, the division of the transcript into episodes seemed the obvious choice at first. One episode usually included two voices, and only a few episodes had one voice (see Chapter 7). The meanings supported each other and also conflicted with each

other. Some were disturbances or innovations in the lesson construction. Sometimes one single episode became the turning point or the starter, end, or culmination in the sequence of episodes. Some episodes suddenly attained high or low ratings. Those high or low numbers related to something unexpected, which was usually a disturbance in the lesson script, an innovation or non sequitur. On the other hand, the peaks or valleys in the rating curve needed building and preparing. The episodes demonstrated a series of meaning construction.

Despite the fact that each episode was important in its turn and at its moment, the analysis, however, did not give grounds to assess which episodes were most meaningful for the participants. Systematic comparisons between dynamics of musical and pedagogical problem solving appeared in many cases to be based on uncertain grounds in the length of episodic musical meaning construction. Accordingly, one episode as a unit of analysis did not relate to the periods of intensity ratings and the comments in the stimulated recall interviews. The change in ratings between high and low percentages of intensity seemed to include several episodes, comprising a sequence of episodes. In these sequences, the parties covered or elaborated a certain topic, a theme, or a purpose, which characterized the musical and pedagogical substance in their musical and pedagogical problem solving. As a result, their actions and operations were usually a combination of musical and didactical means under a topic or theme: two or more episodes constructed meanings in a musical way of working or with various musical elements. The musical or pedagogical theme or combination of topics seemed to consist of musical cycles with combinations of explaining, controlling and narrative modes of transferring meanings. Note that a theme of a sequence of episodes was, however, not the same as an object of the lesson. The themes or topics in a lesson were more like umbrellas or contexts under which the participants worked. This finding raised the question of the usefulness of extending the units of analysis. This extension comprised of sequences of episodes that constructed respective units of analysis for sense making. Consequently, a segment is a form of interaction process under a theme or an assignment, which consists of several sequences of episodes.

The problem of how to divide the collected material into smaller parts is typical to data-based research on dialogue. Studies on instrumental teaching and learning, according to Duke (1999) have used the teacher, the class or rehearsal, or an excerpt of a class or rehearsal as the unit of analysis. Duke specifies that defining large units like “the teacher” or even “the

rehearsal” include many different variables in a single data entry. This setting presumes implicitly either (a) that the variables of interest are homogeneously distributed throughout the interval of time that the unit comprises or (b) that the variables of interest are not homogeneously distributed but the heterogeneity is inconsequential. In larger units of analysis, it seems likely that many aspects of instruction will be obscured, because within each unit varying frequencies and magnitudes of each variable of interest would receive little attention. For example, if a lesson was the unit of analysis of this study, the result would state that the overall character of the interaction was intensive in all lessons of this study. This kind of result would indicate active and attentive teacher-student interactions. However, to understand qualitative changes within the instrumental lesson interaction, more detailed information was needed.

On the other hand, parsing the complex systems into structural components will not provide enough information about its underlying structure to make the object of study understandable in its most basic sense. Duke (1999) argues that it is problematic in lesson dialogue to focus on discussions of the elements of music in isolation in order to facilitate students’ understanding of the whole of music, which may seem too complex to approach all at once. Some parts may be decontextualized. He also argues that such a focused unit of analysis fails to capture the proximal goals toward which the instructional activities are directed.

Duke (1999) concludes that to observe teaching from the perspective of the lesson of the class or the rehearsal is too broad a focus, because it is nearly impossible to discriminate among events of varying importance. To observe from the more limited perspective of the precise content of each verbalization of the apparent meaning of each expression, for example, is too narrow, because it ignores the connections among related events – the student behavior to which the teacher is responding and is hoping to influence.

Rather than parsing instructions into individual components, each of which is described separately, the procedure Duke suggests is to look at instruction from the perspective of identifiable proximal goals. These rehearsal frames, as he calls them, describe instruction in a way that clarifies the relationships between changes in students’ behavior and all observable aspects of teaching, with which these changes are associated. Duke’s rehearsal frame as a unit of analysis encompasses the instructional activities that are devoted to the accomplishment of

an identifiable performance goal or a target. The teacher's implicit or explicit identification of a proximal performance goal defines each rehearsal frame. The goal directs the change in a student's performance.

This study, however, views the teacher-student work in instrumental lessons not only through proximal goals. Instead, the shared objects as the focus of the analysis widen the perspective to collaborative work and the zone of proximal development of the student and to the teacher-student collaboration (see Chapter 3). Therefore, this study presumes that the applied Method of Voices in musical and pedagogical context can overcome the bias of large and small units of analysis and the tendency to analyze lesson activity either from the teacher's or student's perspective.

Consequently, the analysis of musical and pedagogical meaning construction, with a focus on Intensity of Interaction, unfolded into three distinct units of analysis: episodes, sequences, and segments. They represent separate interpretations, which all have roles of their own in the analysis. However, they are still intertwined and dependent on each other.

5.5 Methodological reflections on data and methods

Framing exploration of the empirical data, the data collection and analysis of this study resembles aspects of various approaches to ethnography, including experimental, interventionist, interpretative, and interactional ethnography, (Tesch 1990; Green, Skukauskaite, Dixon & Cordova 2007). This kind of field research in an educational environment uses versatile data collection with multilayered analysis. Unlike the other ethnographic approaches and similar to this study, these kinds of micro-ethnographies make extensive use of video material and focused analysis of interaction, and rather limited data collection (Tesch 1990). The focus here is on limited number of instrumental music lessons, which follow curriculum-guided and structured activity. This activity imparts and reifies the tradition of music education and professionalism in general, with which the participants engage themselves through their historical, musical and pedagogical background.

According to Tesch (1990), the role of the ethnographer for intervention differs from the traditional observer of cultures. Applying Tesch's (1990) explanation into music education, this study maintains that the reflective ideas, budding innovations, and emerging didactic and musical developments in collaborative music lessons mandate investigatory strategies

conducive to cultural reconstruction. The observer is an active participant in the project, not a passive by-stander. The role of an ethnographer is special, because of two almost simultaneous demands: on the one hand, the necessity for gaining a theoretical-historical understanding of ongoing activity, and, on the other hand, intensive fieldwork in connection with the time-pressured sequence of intervention sessions.

Related to the role of an ethnographer as an active participant the field is something that we construct for our research purposes. This means for this study that the field, lessons and lesson interactions, do not simply exist out there, waiting for discovery. Through the principle of reflexivity (Davies 1999), the researcher has to be cooperative and aware of the reaction he influences amongst the activity under examination while infiltrating into, for example, the class. The field may no longer be “authentic”.

As a starting point for the present study, Chapter 3 presented an instrumental music lesson potentially as a ‘contact zone’, ‘third space’, ‘learning studio’, a ‘musical boundary zone’, ‘potential space’, ‘space between’ or ‘dyad’. Both the teacher and the student represent their culturally and historically developed activity systems, which meet, collide, and merge in the lesson (see Figures 3.4, 3.5 and 3.6). Furthermore, when the activity systems share a mutual object of an activity (Figure 4.1), they construct a lesson activity system. Such a shared lesson activity represents the basic perspective of music lesson interaction examined in this study. The method of interviewing the participants of this study draws theoretically on the notion of a learning zone similar to those mentioned above.

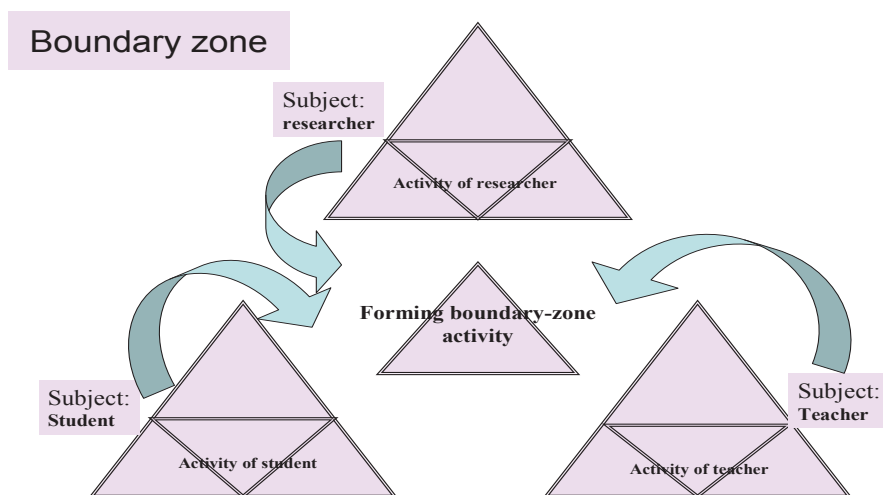


Figure 5.1: Boundary zone activity in an instrumental music lesson

The lessons recorded for this study with the stimulated interviews formed a collaborative meeting point. Figure 5.1 illustrates a setting, in which teachers and students along with the investigator as an observer discusses the lesson activities by watching the video together. These kinds of discussions create a potential for boundary crossing through the conceptualizing of common objects and further on a boundary-zone activity (Konkola et al. 2004).

The motive for reflection in and on instrumental lessons, as Gaunt (2006) found in her thesis, leads the way to development of the lesson activities: all parties, the students, the teachers, and the researcher are learning. The idea of *developmental transfer* (Lambert 1999; Tuomi-Gröhn & Engeström 2001), based on cultural-historical Activity Theory, expresses the idea that transfer of learning takes place through interaction between collective activity systems, taking the form of a negotiation and an exchange between different cultures. Tuomi-Gröhn and Engeström (2001) have reconceptualized transfer, shifting it from standard notions to developmental perspectives. They argue that the vertical and situated accounts of learning and transfer are inadequate, in that the unit of analysis, the learner, is depicted as an individual. What is transferred is not packages of knowledge and skills that remain intact, but

the very process of such transfer involves active interpretation and reconstruction of the skills and knowledge to be transferred. Even though the developmental transfer as such is not the focus of the present research, it offers an overview of reflective work in music education and in situations similar to the stimulated interviews in this study.

Ethnographic examination in developmental work reports, as Y. Engeström (1995) explains, is usually rather concise and introductory, because the analysis that uses theoretical tools systematically is later in the next phase of the expansive cycle. Helle (2006) argues, however, that ethnography is also required when evaluating the experiments to change practice and in strengthening the sustainability and consolidation of the new practices. As ethnography (fieldwork) appears to be a central part throughout the research cycle, ethnography is also indispensable when the actual empirical analysis of the present activity is to be accomplished. The first phase, as well as the next one, uses ethnography to collect material for a 'mirror', which is put in front of the practitioners in the stimulated recall interviews. The mirror in this study took the form of videotaped events at lessons and interviews with the practitioners. At the same time, they filled in transcription forms with intensity ratings concerning the process of the lessons. Here, the mirror serves the interest in the meanings the participants give to their activity and events. The participants teach the understanding of their activity to the researcher. Such two way discussions take place in the stimulated recall interviews of this study's data collection.

Building on dialogue (Bakhtin 1987), this study, along with interactional ethnography (Green et al. 2007), understands that the discourse, modes of communicative activity and objects of the activity, among members makes visible speaker-hearer relationships central to the analysis. Bakhtin argues that speakers speak with an implicated hearer and hearers listen with an implicated speaker. In other words, speakers take the audience into consideration when choosing what to say to whom, where and when, how, in what ways, and to what purpose(s). The hearer can be the conversational partner, or an overhearing audience, that is, another group member or the researcher as an interactional ethnographer (Green et al. 2007). The hearer takes into consideration what he or she knows about the history of the event, their relationship with the speaker, and the topic under consideration, to interpret the meaning of the speaker's message as well as their possible intent. According to Green et al. (2007) the researcher interprets the actions and comments by analyzing chains of interaction and what is

accomplished, interactional ethnography constructs grounded arguments about intentions speakers and hearers signal to each other. From this perspective, what is captured on video recordings of classroom and other institutional life are intentional actions among members of an interacting social group.

From the interactional ethnography perspective, what is captured on video records are the actors, their words and actions within a developing cultural context, as well as visual texts related to the physical spaces and graphic artifacts of the classroom. Theoretically, along with this study, as Green et al. (2007) emphasize, interactional ethnography understands the actors as interpretative objects for each other, not merely for the ethnographer. As such, they discursively and socially signal to each other and to the researcher what their actions mean, what counts as appropriate and/or expected actions and how these observed actions tie to prior and future activity and knowledge. Green et al. (2007) conclude that the participants also signal roles and relationships in the ways that members orient to and position with each other. They also create particular opportunities for identity formulations and attain academic knowledge and social participation.

In the analysis, all phases of the data collection are under investigation. In order to look behind the interviews and grip to the intentions of the informants, and also myself, the analysis examined the lesson transcripts with intensity ratings, abstracts of the interviews and how they influenced the interaction. Moreover, as Mietola (2007) advises, this inquiry aimed to pay attention to the topics, the ones that do not evoke any interest, and to the themes the participants raised themselves; what they wanted to say to the interviewer, what the interviewer wanted to say to them; what was surprising in the interviews. The point was to sharpen the picture of the situations, procedures, and feelings in the interviews. The aim was to gain holistic understanding of the educational situation by focusing on details of each lesson.

5.6 Researcher's subjective position and views

My access to the lessons seemed natural and it was in line with the applied ethnographic design of this study. The teachers and students seemed to welcome the video camera and me as a visitor and interventionist, and the discussions stimulated by the video watching with

genuine interest. The mutual interest of both the students and teachers in the lesson interaction was apparent. The openness for outside observations and interest in information on their own work among the participants was evident. However, this kind of open attitude has not always been the case. For instance, Gaunt (2006) explained that the research access to the one-to-one teaching environment, operating to a large extent behind closed doors, has given rise to complex educational and ethical issues, and data have therefore been scarce. She reported that one-to-one tuition has before the turn of century been relatively uncharted in terms of research, especially in higher education. Gaunt points out that gaining access to teaching environments in order to gather research data, even relating to teachers' perceptions of their work, has been reported as difficult (e.g. Rostvall & West 2001).

Based on the researcher's own experience, the 22 video recorded instrumental music lessons seemed to provide a cross-section of the everyday musical experience and competences of instrumental lessons, and as such followed the cultivation of the Western music tradition. European art music and the conservatoire tradition dominated these lessons, the working culture of each institution, and the institutional curriculum. These historical, cultural, and organizational limits narrow down the musical perspective of the lessons in the global, European or nationwide musical world. Western European music education with its cultural and practical implications in instrumental lessons has been classical for centuries. However, as one of the points of departure of this study stated (see introduction), the past decades have challenged the "last fortress of education in classical music" (comment of a teacher), the instrumental music lesson.

The selection included highly devoted teachers with personal enthusiasm, passion for music, their work, and the students. They all volunteered for giving the recordings of their work to a colleague to be watched and discussed. The willingness to elaborate instrumental teaching is obvious in their common interest. A reputation of excellent musical teaching qualities was the first criteria for asking the teachers to participate. Lessons with teachers having only a few years of experience in teaching, for example student teachers, were not included in this study. This limitation, however, does not presume that experience is necessary for Intensity of Interaction. Limiting the lessons examined in this research to experienced teachers only turned out to be wise for practical reasons: collecting and analyzing the present data was laborious enough without added factors. Factors such as hesitation in

front of a camera, lack of basic musical and pedagogical skills, inexperience in managing unexpected student reactions and the like are important for teacher education and development. Their connection to Intensity of Interaction would provide interesting prospects for development in instrumental music pedagogy. Contingently, future studies of Intensity of Interaction may investigate comparisons of the effect of experience and other factors in music education.

The teachers of the videotaped lessons therefore had highly competent and professional standards. Each one of the teachers of this study represents experience and speciality in their musical domain. They meet, in my perception, the criteria of expertise of instrumental teaching Gholson (1998) applied, and the characteristics Davidson, Moore, Sloboda and Howe (1998) found in their research on teachers' roles in the development of musical ability. One central part of the expertise of the participating teachers of this study was in fact the openness for personal and artistic development in their pedagogical work. This openness could be seen as a contrast between knowing-how and being open for unknown; to be highly valued as an expert instrumental teacher and yet with the attitude of a novice for constant exploration for artistic solutions (see statements in the Introduction). The same twofold teacher identity has also emerged elsewhere. Mills and Smith (2003) referred to research in a conservatoire context, which highlighted an important contrast between the perceptions of instrumental teachers of their own skills as teachers and the expectations of students at the same college of their instrumental teachers. The teachers in the study by Mills and Smith (2003) perceived themselves as committed teachers, but as accomplished novices rather than answer-filled experts, and emphasized that teaching improved their own effectiveness as performers. These thoughts of artistic teaching attitudes were evident also with the participating teachers of this study.

As a starting point, this study considered the traditional one-to-one form of music education as a core process in musical and instrumental teaching and learning. However, at the same time the other forms of instrumental teaching and learning were meant to add information to the traditional format of musical and pedagogical interaction. Most of the lessons (16) were therefore in the structure of one-to-one tuition, one lesson was a pair lesson and five were group lessons (Appendix 1). The musical and methodological variety of the lessons directed the selection to a certain extent. The students of different ages and gender

were chosen according to teachers' propositions. These choices were based on our discussions in which we talked about the nature and the object of the research before the video recordings started.

Most of the participants were violinists and not, for example, cellists, partly because of the researcher's instrumental domain. My profession as a cellist and violoncello teacher caused the decision to limit the data collection. The violin lessons dominated the data collection in order to keep a distance to the instrumental details and schools of teaching. As a cellist, I was, on the one hand, close enough to understand the details and also the hidden meanings that emerge in the string teaching domain. On the other hand, I was far away enough not to get stuck into cello-oriented opinions, technical or other instrument specific traditions. Along with the stringed instruments, the flutists and singers provided interesting information of musical and pedagogical meaning construction from a quite different instrumental perspective. After all, because this study was interested in the teaching and learning interaction other instrument could have participated as well.

The violin students of lessons L1 to L11 were at critical stages and ages (both musically and personally); critical in the sense that they had had a good start for music and life, but their musical maturity remained still at the stage of fragments of promises. Everything was unfinished, and at the vague beginning of musical and personal growth. They were talented, already musically and instrumentally competent for quite demanding performances, chamber music productions, and for using their abilities as an instrumentalist in other contexts. These contexts like school, orchestras, and ensembles of their own, seemed to have an important part in their musical and personal life. Yet the extended time for other musical and social interests seemed to influence their instrumental lessons. It seemed important to have a good balance between personal development of instrumental skills and the expanded musical interests.

Furthermore, the students in lessons L1 to L11 faced their emerging knowledge of the tremendous amount of the undone musical and technical work that remains in the future. The professional future of an instrumental music student demands personal work that may seem endless. The students expressed that they sometimes had a feeling of inadequacy: no amount of practicing seems to be enough. The teachers took these feelings of incompleteness with responsibility and as an opportunity for the student and for themselves as well. An artistic

development process, when everything goes well, with constant progress of a growing young person is indeed a tremendously rewarding experience also for the teacher. Such an enjoyable development, an optimal experience of musical engagement, consists of developing skills with increasing challenges (e.g. Custodero 2002a; Tuovila 2003).

The flow of the interaction of lessons in this study was indeed real and rewarding. However, it was not endless. At certain points of each lesson, the flow was obstructed. Accordingly, when the musical and pedagogical development seemed to decline or stop, added pressure could be sensed immediately in the lessons. The violin teacher commented to his student:

T (L9-L11): You are a talented boy, but still I think our work at the lessons doesn't seem to create results that one would expect, and I particularly would hope. I haven't really figured out why not. (Stim. 21.3.07)

The adult students in the lessons L12, L14–L17 had already passed several critical transition stages and turning points in their musical growth. Professional musicianship is not only a vague option in their instrumental work any more. Moreover, a constantly growing awareness concerning the demands and required qualities of the musical profession builds pressure on these students. This progress goes unavoidably through minor or major dissonances, obstacles, breaks, or even crises. The singing teacher in lessons L15 and L16 was definite regarding the fact that “there is no learning without crisis”. The students at a professional level are at any rate expected to take more and more responsibility for their own work as a whole (Jorgensen 2000).

However, seeds of responsibility and love for music were just about to be sowed in the lessons L13 and L18–L22 of students under school age. The young boys possessed the kind of spontaneity and openness that teachers wish to preserve, and thereafter wish to hear at concerts. The emotional involvement and learning of basics in instrumental and musical competence created a challenging combination for their interaction. Therefore, their work was highly focused with fast timing. Despite the rapid pacing of verbal and non-verbal, musical and bodily communication, the teacher and the boys had periods of concentration and peace. For example, it was remarkable how the children waited for their turn, while the teacher worked separately with one boy at a time.

As expected, the data consisted of various kinds of interaction due to the different ages of the students, various formats (one-to-one, pair, group) of the lessons, and the different instruments associated with the chosen cases and lessons. Therefore, these lessons have offered a rich range of perspectives also for examining Intensity of Interaction.

The teachers and students reacted in a collaborative context. Each lesson had a context of its own in the curriculum, in the timeline, monthly or yearly planning of the institute. The overall lesson construction in all cases was the same, even if the elements of the activity systems were somewhat varied. In a collaborative context, the intensity ratings illustrated the personal views of the teacher and the student. From an Activity Theory perspective, the activity is the context in itself (e.g. Engeström, R. 1999b). The teacher and student were the subject(s), focusing on music or on the developing musicianship with musical and pedagogical tools. They followed the rules of the institution or rules of their own. They worked within a community, which could be the institution, the domain of the musical instrument, or the historical line of musicians in the tradition. The community has a tradition for division of labour, which they implied in the lessons (see Chapter 3).

The lessons were not just separate fragments of instrumental tuition. Thinking of how the participants perceived the significance of their musical and pedagogical work in the examined lessons, I also had to consider the timescale the lesson activity; the whole situation, the life situation of the parties, and the state of their musicianship. Moreover as a starting point, their previous experiences of music education influenced the long-term planning, the lifespan, of the lessons (e.g. Hargreaves, Marshall & North, 2003; see also, Chapter 2). Within the framework of the Activity Theory, Y. Engeström (2004) defines lifespan as follows:

A lifespan means the time interval of the production of a commodity or service typical to an activity system, a through-flow of an object, consignment, assignment, or problem from 'raw material' to the outcome (Engeström Y. 2004, 111).

A lifespan or trajectory of a service or in instrumental lessons may be a year-long learning relationship or a series of meetings. In music, the periods of teacher-student relationship can vary from, for example, one week to several years. The duration of a trajectory is significantly shorter than the historical development cycle of the activity system. On the other hand, a trajectory is significantly longer than a single action or a group of actions in a situation. This makes it possible to observe noteworthy learning processes in the length of a lifespan. Y.

Engeström (2004) points out that a lifespan can have different forms or character; some are linear and some circular. He states that even an innovative change of a single action or a group of actions will not change the object of the activity; however, the change of the “character or form of a lifespan” almost always means a new analysis of the object (Engeström Y. 2004, 112; my translation).

The lessons I had chosen for this study represented either one part of the lifespan or the whole lifespan, the beginning, the middle and the end of it. The lessons L1–L3, L5–L8, L12–L14, L18–L22 consisted of processing expressions of musical works or technical targets in the length of a total lifespan. Each lesson was a significant part of the ongoing musical or technical work. The musical projects had their own time scale depending on the music prepared and at what stage the preparation process was situated. Different timing was also due to the age and musical history of the student. The teacher-student relationships were also at quite different stages. Some had just started and some had played together several years.

In sum, these shorter or longer life spans were contexts in which the lessons and the teacher-student work was carried out. Although, the interaction of each lesson was unique at every time, it was related to a longer preparation process. For example, one lesson was part of the technical or musical preparation of a musical piece which was to be performed.

5.7 Reliability of the data

The data in this study were gathered by video-recordings of the lessons and audio-recordings of the interviews, “low-inference descriptors” (Seale 1999, 148), which were transcribed. It should also be noted that the stimulated recall sessions resulted in information given through the active participation of the researcher. Consequently, the researcher and the video camera in the lessons can be seen both as a limitation and strength during the data collection process. The presence of a video recorder at a lesson may have influenced the behaviour of the participants. However, this potentially negative effect, as expected, was rather limited: people quickly became accustomed to the video camera. According to earlier studies as well (e.g. Rostvall & West 2001; Karlsson & Juslin 2008; Hultberg 2008) both teachers and students reported that the lessons had followed the ‘normal’ routine. They admitted that they had been aware of the camera at first, but that they soon forgot about it.

Recent studies that observed and gathered empirical data on human behaviour have increasingly applied video as the primary source of information (e.g. Green et al. 2007). First of all, video recording has proven to be an effective form of data collection, which provides the researcher with many simultaneous and varying phenomena: speech, mimic, gesture, environment of action, sounds, noise, interactive elements, use of space, time. R. Engeström (1999b) regards video taping to be particularly useful in approaches, which are, typical to qualitative research, basically organized and used socially and divided into social and material environments. In such cases, as explained earlier in Chapter 3, the knowledge and actions are not primarily in the heads of the participants; the interaction process externalizes the meaning production (Engeström Y. 1999b).

Secondly, video and audio recordings allow the researcher as well as the participants of stimulated recall interviews to return to the original situation. Particularly in musical interaction, the participants talk with their body, instrument and mimicry. This is an important source of information for the analyst, and also for teachers and students.

Audio and audiovisual recordings enable the researcher to pay attention to details that are otherwise easily overlooked, because they are associated with rare events rather than with commonly noticed and frequently reoccurring patterns. Tesch (1990, 47) explains that within so called American ethnography, some researchers paid particular attention to language and began using some of the methods developed in sociolinguistics. Their work has been labeled micro-ethnography or ethnography of communication. It is heavily based on automatic-recording of naturally occurring interactions, for which every moment can be revisited by replaying the captured data.

In that sense, on one hand, the data collection of this study may have influenced the lesson interaction: the video camera and the researcher were present in the lessons and the researcher participated actively in the reflections. On the other hand, the lessons included no extra or special arrangements. The strength of the form of the observation by video recording was that this kind of setting well served the purpose of this study.

Eskola and Suoranta (1996) write that the interpretations of the researcher are crucial for any qualitative research. For the assessment of interpretations in this study, this report has described the analytical process in detail. To increase reliability, the reader must be able to verify that the received perceptions of the researcher were not based on random factors,

including the way of describing the raw material and the technical quality of the data. For this study, the data were available for all the participants who watched carefully and commented on the provided data several times. The processes were iterative enabling the participants to return to their comments. In addition, the stages of the analysis are visible through tables and figures (see also the Appendices).

As Silverman 2005 states, transparency is an essential element of qualitative research, and reports should explain the use of methods, including how the empirical data were gathered, how they were analyzed, and whether the methods were suitable for the given research questions and empirical data. Therefore my research report (Chapters 6, 7, and 8) make use of a wide range of excerpts from the original data.

5.8 Limitations

There are limitations of the present study that should be kept in mind. Firstly, typical for qualitative research, the relatively few cases studied do not permit quantitative generalizations. Rather than to generalize facts on disadvantages or advantages of the examined lessons, the purpose, typical to qualitative research (Silverman 2005; Kvale 1995), of the limited number of lessons in this study aims for theoretical inferring of the nature of lesson interaction. However, the analytical generalizations that this study generated were based on interpretations of the empirical material and analyses.

Secondly, the number of different musical instruments was not even. Chapter 5 explained the reasons for choices that guided the data collection. The empirical material suffered from the absence of several notable instruments, for example piano, guitar, and percussion. The lack of these instrumental lessons was unfortunate and leaves an imperative challenge for further examinations.

Thirdly, although teachers and students claimed not to have been influenced by the video camera during lessons, the camera and the researcher may still have had some impact on their behavior (e.g. comments on lessons L9–L11). In two lessons, the camera was standing alone for a while in the class (L16, L17). The presence of a video recorder at a lesson may have influenced the behaviour of the participants. However, the negative effect, according to earlier studies, is rather limited, as people easily get used to the camera (e.g. Rostvall & West 2001, Karlson & Juslin 2008, Hultberg 2008). Some participants in the lessons of this study

commented that perhaps only the range of relaxation and fooling around was limited during the lesson activity due to the presence of the camera or cameraman (L1–L4). They also knew I was interested in intensive working sessions, therefore some teachers commented that they worked maybe more intensively than they normally would. I found however no direct comment or evidence supporting the external interference on the content or mode of action in the lessons. Rather, they all commented that the videos showed their normal way, or as some commented, their best way of working.

The decision to use audio recording instead of video in the stimulated recall interviews and discussions turned out to be convenient and relaxing for the participants. They seemed to find it easier to concentrate on the lesson activity and discussion without having to look “nice and eligible” in the camera. As a practical solution, the timing of the audio recordings with the primary timing of the lessons turned out to be useful and reliable.

Fourthly, the preconditions, directions, and the actual situations of watching the videos and marking down the intensity ratings were somewhat inconsistent (Table 5.3 and Appendix 2). The conditions of recordings, stimulated recordings, and intensity ratings were in natural settings. Consequently, the timetables of the participants dominated the data collection. Therefore, the timing and settings of the recall sessions varied after each lesson. These inconsistencies may have reduced the comparability of the interpretations of lesson interactions. Such comparisons, however, would be extraneous to the purpose of this study. Furthermore, according to the comments of the participants, the alternating time gap between the recorded lesson and the stimulated recall session did not influence their intensity ratings or recall of the lessons. While the different combinations of teachers, students and observers in rating the intensity added to what they provided alone, these combinations also offered useful information for developing the method of collecting data in this manner. Moreover the natural conditions, which were not fixed by force, and which were sensitive to each teacher-student relationship, guided the stimulated recall settings. As a result, the alternating combinations of participants and timetables in organizing the stimulated recall sessions also facilitated trials and elaboration of different forms of reflective practices for instrumental music tuition.

Fifthly, the video recordings with one camera were insufficient when capturing non-verbal communication, mimics, movements, conducting, and the like. The use of two or more

cameras focusing to each member all the time would have provided data with a more specific and accurate view of the interaction. Reactions of the partner(s) often say more about the “whats” and “hows” of the messages transferred in a dialogue than the actual content of speech. Use of one camera, however, was sufficient for the purposes of this study. Still, in further studies the multi-camera recording would increase the accuracy of the collected visual information.

Sixthly, two or three analysts interpreting the same data would have increased the reliability. For this study such arrangement was impossible for two reasons: The criteria for interpretation were elaborated during the process, therefore orientation on an equal basis for the job would have been quite arbitrary; the laborious process of analysis would have engaged expertise that was not available for the time being. Such introduction to the methods and practices for execution of this research would in future belong to education in, for example, music education pedagogy or research. Consequently, both of the reasons for not employing more researchers or assistants in the current research as well as the other limitations mentioned above support the prospects of future studies related to Intensity of Interaction.

Chapters 7, 8, and 9 will return in detail to the analysis. Outlining the research as whole, the theoretical framework and research methods of this study carry a preconception by which examining Intensity of Interaction offers a multi-level ground for enabling reflection and development of the traditional structure of instrumental lessons. Before attempting to draw such conclusions, Chapters 6, 7, and 8 demonstrate the results concerning the data collection and analytical techniques unique to this study. First, Chapter 6 presents how the participants deployed intensity ratings in describing their perceptions of the lesson interactions. At the same time, the comments recorded in the stimulated interviews and the results of intensity ratings introduce and elucidate the lessons under investigation.

Chapter 6

Results I: Perceptions of the teachers and students

The following four chapters present the results of this study. Chapters 6 and 7 describe two approaches or methods that this study developed and applied for analyzing the characteristics of interaction within instrumental music lessons. Chapter 8 extends the analysis by combining these two approaches. As a conclusion, Chapter 9 presents the findings of the analysis by an interpretative framework. As an introduction to the results, Chapter 6 presents the intensity ratings (see Chapter 5) for a description of what those ratings entail. While the intensity ratings, descriptions and comments of the participants provide numbers and figures describing the teacher-student work, they also present an overview of the description method and the lessons examined in this study.

6.1 Intensity ratings as a tool for observation and reflection

In order to provide transparency regarding unveil the process of observing and writing down of intensity ratings, the following section presents critical points raised concerning the questions to and by the teachers and students. The ratings that teachers, students, and observers marked down on the transcripts illustrate their perceptions of the dynamics in lesson interaction. These figures or percentages indicate the experienced intensity at a certain moment between the ideal maximum and minimum. As previously mentioned in Section 5.2, high numbers indicate that the parties in the lessons were maximizing their communicative potential. Similarly most of the expressive potential was perceived as momentarily still available, saved or in resource, when they provided low numbers.

Use of such an open and broad definition of intensity, and the actual process of assigning intensity ratings naturally raised some questions amongst the participants. As mentioned previously, these conversations concerning the use of intensity as a description tool, offered valuable data for this study. For example, the flute student in lesson L17 asked what I meant by the percentage. My answer was that the numbers are meant to illustrate his conceptions of the realization of their communication.

StJ(fl): Is it a percentage of some ideal? (Stim at 20.3.2007)

R: Yes, it is your personal view of your communication related to the ideal.

Some of the participants in this study felt at first that the task was quite confusing or obscure.

StN(fl): very difficult to put some numbers. Like lottery.

Regardless of the fact that the other flute student felt that she was just guessing her numbers at first, the numbers she gave independently were very much in line with the numbers and comments of the other student and the teacher.

StN(fl): When we started Brahms it was higher (the percentage), and now it is a little lower. My concentration loosened here.

StJ(fl): When we played after each other (the Apollo thing)

StN: at 14'30'' I think it was rather good feeling in our playing

StJ: yes, it was easier to listen, the intonation was good as well.

(Stim at 20.3.2007)

Also the violin students in lesson L14 and lesson L12 commented on the difficulty of putting down numbers in the first stimulated recall session (Stim 21.3.07). However, in the end of the last session (Stim 28.3.07), when I asked again how they felt about the rating, they said it was not so difficult after all.

The flute teacher pointed out an important misconception that the percents could resemble grade systems or judgments. Someone might think so, when putting down percentages.

T(fl): Have you considered this percentage, because it can depend on the critical mind of the person how high or low the number he or she puts on the paper? It can be like giving grades for the lesson.

However, the purpose was not to give a grade for the lesson, since high intensity is not necessarily related to 'good' teaching or learning. The ratings were merely a tool for illustrating the experience in a concrete way. The flute teacher pointed out that sometimes when we loosen up, something starts to happen.

T (fl): But that is intensity. It is difficult not to do so much in a lesson. To do nothing is difficult. (...) the idea of not doing something is the problem of the western society.

I agreed with her in what she said about "to do nothing". Letting things happen in music and in interaction often create more intensive periods of work than constant "hustling

around”. Of course, appropriate and well focused activity in instrumental teaching and learning is most beneficial as well. For instance, for the purpose of discerning such differences in teacher student interaction, I asked the participants to use intensity ratings as a tool of description.

6.2 The scale of the intensity ratings

The numbers illustrate the teacher/student perceptions and interpretations, which were quite different to start with. The level of the maximum and minimum, the range in the rating variation of each interpreter were a personal choice. Some students appeared indeed to be more critical or suspicious about themselves as musicians than others. Some teachers expressed more critical views of themselves as teachers than others. These attitudes or self-conceptions clearly affected the general level of the percentages.

Tables 6.1a and 6.1b collect the mean and range of the ratings in each lesson. Each lesson had some differences in the general level of the ratings. I call the difference between the ratings of the student and the teacher or the observer a Distance of Average Intensity ratings (DAI). The DAI figures with the highest and lowest ratings (amplitude) by the teacher and the student illustrate more accurately what happened during the lessons than a plain average.

Distance in average intensity			Average and amplitude (High/ Low) of participants							
			Teach		Obs		Obs		Stud	
Lessons 1-4		DAI	Aver	Ampl	Aver	Ampl	Aver	Ampl	Aver	Ampl
16.4.2004	T/ St	30,5	79,5	95/30					49	70/30
30.9.2004	T/ St	28	90	95/70					62	95/40
9.12.2004	T/ St	36,9	85,9	95/90					49	70/10
5.5.2006	T/ St	27,3	84,3	90/70					57	80/30
Lessons 5-8										
19.11.2004	Obs/ St	32,7			87,1	95/80			54,4	60/50
16.4.2005	T/ St	48,3	77,5	87/65					29,2	50/5
1.2.2006	Obs/ St	52			93	95/90			41	55/30
13.4.2006	T/ Obs/ St/	43,5	92,5	95/90	93	100/90			49	60/30

Table 6.1a: DAI and Amplitude of intensity ratings in lessons 1 – 8

The reason not to use the plain average was that the average of the ratings in each episode or sequence of episodes would only give a general intensity rating curve for the lesson interaction. This kind of illustration would serve purposes such as comparing lesson

atmosphere in institutions or different pedagogy or music genres in instrumental music lessons. Such comparisons, however, would be in contrast to the aims of this study. For making systematic comparisons, the data would best have consisted of far more lessons and observers. Even if the data collection would have been much larger than in this study, the result of using plain averages would only engender generalizations regarding lesson atmospheres or teacher and student efficiency (see Madsen et al. 1989). Besides, intensity ratings, as a general description, could easily direct the readers to a misleading conclusion concerning putatively objective knowledge of good or bad, effective or ineffective teaching and learning. This would be false, at least from the perspective of this study.²² Since this study was interested in the character and qualitative definitions for Intensity of Interaction, the distance of the ratings and the ratings by themselves seemed both descriptive and informative.

The numbers illustrated the character of the communication of each lesson separately. Comparison between different lessons was not the point. After all, the ratings of the lessons would not have been comparable, because each lesson was rated by different persons, and the conception of the intensity ratings seemed to vary from evaluating personal intensity to evaluating collaborated and joined communication. These slight differences in the evaluation perspective came through in the stimulated recall interviews. However, the perspectives in the evaluation were in line with the lesson communication. Those who emphasized the communicative aspect in their work also did so in the lessons. Those who concentrated in their own work in the lessons also gave ratings according to their own performance. This was true not only among the teachers. Students seemed to follow the same line of logic as well. As an observer, I easily agreed with their ratings. Sometimes I was quite surprised to see what they had given, but their comments helped in understanding the provided ratings.

The distance between teacher and student ratings in different lessons (Tables 6.1a and 6.1b) varied considerably. The longest distance (DAI: 52) was in the violin lesson L7, and the closest distance (DAI: 1,2) was in the violin lesson L12. While the amplitude between the highest and lowest intensity ratings were in the observer's ratings 95/90 and in student's ratings 55/30 for lesson L7. Same numbers for lesson L12 were 85/50 for the teacher, 86/60 for the observer, 90/50 for the student.

²² Regelski's (2005) comment and question "good for what?" would again be relevant here.

The intensity ratings of the teacher and student were rather far away from each other almost all the time in the lessons L1 – L8. The examples, such as Figure 6.1 in Section 6.4, illustrate how the ratings in each lesson related with each other. Overall, the difference in the average intensity ratings in lessons L1 - L8 illustrated views of clearly enthusiastic, active, and highly intensive teachers with rather self-critical, distant, shy, and musically immature teenage students.

Even if the learning behaviour of the students in lessons L1 - L8 was characteristically introverted, this study regards the finding as a mere state of communication; not as either efficient or inefficient learning or teaching. The student in lessons L1 - L4 seemed to need time to concentrate on how to do her bowing exercise or the trill in the composition by Kuula correctly; and exactly in the way the teacher had shown. The teacher in lessons L5 - L8 was active in waking up her teenage student musically. The student, however, was more concerned about her development of her own technical ability. Actually, both of the students obtained substantial information on their violin playing and about the music. In the stimulated-recall situation, they both expressed that the experienced lack of ability to play the violin, made them hesitate in the lessons. Figure 6.1 gives an overview of the ratings for lesson L1.

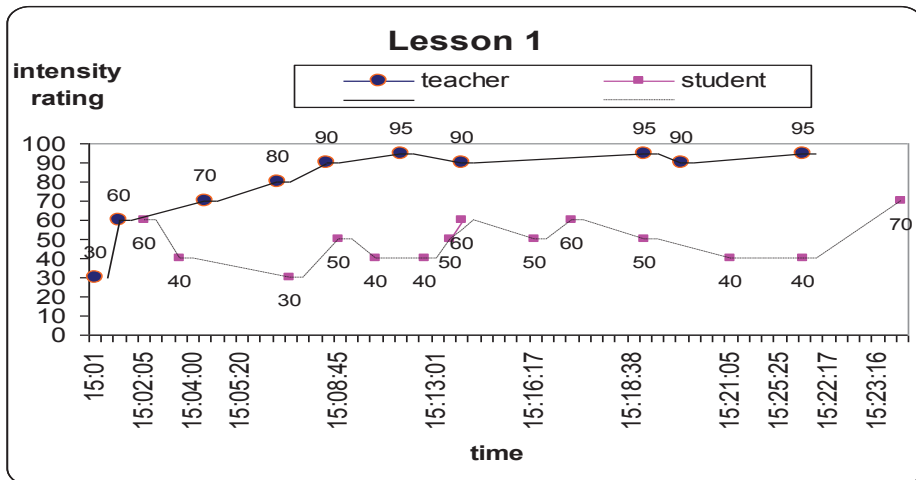


Figure 6.1: Intensity ratings in lesson L1

The rating curves in lesson L1 seemed to stay equally distant from each other for nearly entire time (DAI: 30,5). The overall direction of both curves was, however, somewhat similar. The four sudden declines in the student's ratings were exceptions; the teacher's high and the student's low ratings occurred almost at the same time, in the same episodes. The student received enthusiastic advice and knowledge for her playing from the teacher, which, also in my view, at first made her passive and pondering about her own ability to perform the new skills on the violin. In her comments, the student also referred to her ability to play the way she and the teacher would like her to play.

Distance in average intensity			Average and amplitude (High/ Low) of participants							
			Teach		Obs		Obs		Stud	
		DAI	Aver	Ampl	Aver	Ampl	Aver	Ampl	Aver	Ampl
Lessons 9-11										
12.12.2006	T/ St	7	75,8	80/70					68,8	80/60
19.12.2006	T/ St	4,4	75	75/75					70,6	95/25
23.1.2007	T/ St	4,3	72,4	78/65					76,7	88/75
Lessons 12-14										
28.9.06	T/ Obs/ St	1,2	72,3	85/50	83,6	86/60			73,5	90/50
2.10.2006	T/ Obs/ Obs	14,75	73	80/65	82,5	90/70	93	95/90		
12.10.2006	T/ Obs/ St	7	78,6	90/60	85,1	100/60			85,6	150/60
Lessons 15-16										
4.12.06Tr	T/ Obs/ St	11,1	82,1	95/70	81,3	100/50			71	85/60
4.12.06T	T/ Obs/ St	1,3	86,1	99/70	77,9	90/40			84,8	96/50
Lesson 17										
6.2.2007	St/ St	6					73,3	90/60	67,3	100/30
Lessons 18-22										
28.1.2006	T/ Obs	16,11	73,89	90/30	90	90/90				
4.2.2006	T/ Obs	10	80	90/60	90	90/90				
18.3.2006	T/ Obs		55	70/30						
1.4.2006	T/ Obs	25,91	64,09	90/30	90	90/90				
22.4.2006	T/ Obs	24,4	65,6	90/20	90	90/90				

Table 6.1b: DAI and Amplitude of intensity ratings in lessons in lessons L9 – L22

Quite the opposite situation was evident in the lessons 9 – 11, in which the male student was actually very communicative. The low DAI numbers (7, 4.4, and 4.3) illustrate that the teacher and student both gave even numbers for the ratings. In these lessons, the teacher questioned the efficiency of their work. He expected more change in the students playing as a result of their work during the lessons. The communicative lesson atmosphere by itself did not necessarily guarantee the symptoms and value of good learning in the opinion of the teacher.

T: You are a talented boy, but still I think our work at the lessons doesn't seem to create results that one would expect, and I particularly would hope. (Stim. at 29.3.2007)

At the same time, to be clear, the smaller DAI in the ratings of other lessons should not necessarily be taken as improved musical or personal maturity or less critical opinions (Table 6.1b).

The students seemed to be more active, free to express their opinions, open, and communicative. The ratings and the comments in the stimulated interview material also supported the interpretation that the students in lessons L9 - L22 had a more positive musical self conception than the students in lessons L1 - L8.

We also discussed the differences in their ratings. For example, the teacher and student in the vocal lesson L15, (episode 17/53 at 36'00'')²³ rated their intensity at the beginning quite differently: the teacher gave 80 and the student 60.

T: It is quite natural, because the student had just finished her performance and the teacher is only beginning.

St: I am kind of waiting for the comments, and feedback.

These comments supported the ratings. For accuracy, it was advantageous to know on what they focused in their interpretations. Their comments in the stimulated recall interviews gave grounds to understand their altering communication. The student in violin lesson L14, for example, explained why she gave a low percentage for a certain moment.

St: (...) then later I put 50% (episode L14:16/27), because she (the teacher) was looking for some music and so on, and we didn't communicate with each other at all. (lesson 12.12.06, Stim. 21.3.07)

Her comment on the low numbers in the percentage curve revealed that her ratings depended on their communication. At least, then, she had an idea of the communication she expected to find in the lesson. In the stimulated recall of the same lesson (L14), the teacher commented on her feeling that the student was present because the teacher touched her: they had physical contact.

²³ The analysis divided the lesson dialogue into episodes. The numbers 17/41 indicate the place of the episode in the transcript of the lesson dialogue (see chapter 7).

T: Then I took her by the hand. (...) at 6'54'' (episode 7/41). (I gave) 90% She was present, because we did something concrete and she was able to produce better sound quality.

For the same moment (L14:7/41) in the lesson the student gave 150% and wrote that there was too much at once for her.

St: I was thinking about so many things, it was good; the intensity was very high and then came the snap in my brain. I like to work like this. It was a rather long period of time of intensive working.

The student described that she experienced this 10 minutes long period of exercises on violin technique stimulating. It was stunning both physically and mentally for her. The observing student agreed with the comments of the teacher and the student on episode 7/41.

Obs: It was easier to follow. First in the beginning (there was) a little warming up kind of searching whether start or not to start (really playing). Then it was very intensive, short statements and corrections 70-90%.

The same lesson continued in episodes 8 – 15/41 with finding physical relaxation in the students' playing. She had felt herself stiff and the exercise seemed to help her.

St: (L14:10/41) (...) lifting hands felt good and I got enthusiastic about it, and I started to communicate. (We had) a talking period without the violin at 12'

By a talking period, the student referred to a discussion in episodes 13 – 15/41 concerning her sound, practicing without thinking, and physical relaxation.

Obs: I think the intensity is rising, very detailed working, from 12:05 until 13:27 only talking. It is difficult to say; it is a more relaxed way of talking 13:32 – it was very intense.

I asked the participants to use ratings ranging from 0% to 100%, but the rating of one student's at a certain moment (L14:17/41) was over 100%. This example would gnaw the plausibility of the ratings, if they were under principles of quantitative research. For the present analysis, however, and as emphasized earlier, the numbers are personal interpretations and relative within the scale chosen by each participant. The rating 150% (L14:7/41) belongs to the data as an exception indicating the student's emotionally colored expression. Consequently, this exception points out the illustrative nature of the ratings.

In general, the results proved the ratings to be applicable. Examination of intensity ratings during the interpretation of the lesson dialogue stirred up discussions while watching the

videos. The percentages provided a concrete graph as an illustration of the interactive process. These findings were crucial for the extension of the investigation and enabled further analysis.

Even though some of the teachers and students questioned and hesitated for a minute or two in giving percentages, all lessons were finally rated. After all, the participants seemed to have rather clear perceptions of their work in the lessons. The lessons were in the natural place and order of the schedules without changes in their outset or contents. Hence, the avoidance of any special arrangements in undertaking the lessons was a priority objective in the data collection. Consequently, this principle made the timing and placement of the stimulated recall interviews a challenge. Thus, the timing and settings of the actual rating process were quite arbitrary. Some of the stimulated recall interviews were immediately after the lessons, while for practical reasons some of the interviews were later, even a month or a year after the actual lessons.

In addition, some participants watched the videos once, while some watched the same lesson twice or three times. Nevertheless, every participant, except for the teacher and student of lessons L9, L10, and L11, had a chance to watch the video alone. But for the interest of creating collegial discussions, this study elaborated the stimulated interview process in some cases by having different combinations of participants and observers present during the interviews.

One might expect these deviations within a systematic data collection to distort the intensity ratings. However, the same persons writing down ratings immediately and a month or a year later maintained the same scale and amplitude and did not want to change any of the ratings when asked to do so. Therefore, the current analysis used the ratings as such, although with appropriately reserved caution.

6.3 Intensity ratings and description of the lessons

The following describes the main points of the interactive character of the lessons examined in this study. The same teacher and student were present in some of the lessons (L1-L4, L5-L8, and L9-L11). The rest of the lessons had different students participating, with the exception of some cellists who were present in all of the group lessons (see Appendix 1). The charts in the beginning of each series of lessons present details concerning the dates and duration. The timing and duration concerning the recorded lessons and the stimulated recall

interviews of the participants and observers offer comparable information. The presented figures illustrate intensity ratings in graphs. The corresponding discussions deal with the process of considering the numbers and principles of thinking in terms of Intensity of Interaction. Appendix 6 provides full sketch maps of descriptions and graphs of intensity ratings for each lesson.

Lessons L1–L4:

Lessons L1–L3 were recorded in the autumn of 2004 and lesson L4 in May 2006. The stimulated recall interviews with the teacher and the student took place after quite different periods of time.

Lesson	Recording		Dates of stimulated recall interviews		
	Date	duration	teacher	student	observer
L1	16.9.04	0:22:04	10.10.04	1.12.06	12.12.06
L2	30.9.04	0:20:38	10.10.04	1.12.06	12.12.06
L3	9.12.04	0:20:42	5.12.06	16.2.07	12.12.06
L4	5.5.06	0:27:17	17.5.06	16.2.07	12.12.06

Table 6.2: Recording dates of lessons L1–L4

At the closest, the time gap was 10 days (L2) and at the longest, it was almost two years (L3). Table 6.2 demonstrates also that the student watched, commented, and rated the lessons after a considerably longer time than the teacher. The teacher watched the lessons also with an observer, who commented and discussed the interactions, however, without rating the lessons.

An experienced teacher and a thirteen year old student participated in these lessons. According to the teacher, their personal characteristics were quite different from each other: The teacher can be described as an impulsive person, while the student is a rational thinker. The difference between the two personalities was quite obvious in their interpretation. A comment from the teacher describes how she felt about their appearance in the lessons.

T: The basic seriousness is dominant; even if I would jump on my head she would still stay the same. But she has got a very good spirit in her playing.” (Stim 5.5.2006)

The analysis supports the view that the teacher was very definite and dominating in each lesson. The teacher used much verbal communication. The student talked very little, hardly at

all. The teacher also explained that the double-language background (the student speaks Swedish at home) was one reason for why the student's talk was difficult to hear and why she also talked so little.

T: I talk too much. I should give her more time to play. (Stim 16.9.04)

Verbally the interaction in these lessons seemed clearly asymmetrical (see Figure 6.1). Apparently the amount, form or content of the verbal interaction didn't give the whole picture. Trials of implementing the new adjustments in her technique simply kept the student busy. The student considered the received information carefully. At any rate, she answered by playing, by acting, by body adjustments, by nodding, and by mimics. However, even though she might have been wordless at times, that did not make her voiceless.²⁴ In my view the student was struggling to find her voice within the quite teacher-dominated dialogue. Operating in this way seems to be quite common among teachers instructing students at this age (Rostvall and West 2001; Tuovila 2003). Evidently, the technical ability of the student developed efficiently during these lessons. Consequently, the student, when I asked, followed the ideas of the teacher quite systematically.

The main topics of the lesson were development of bow technique: sautillé in *Moto Perpetuo* by Böhm and staccato in an exercise. They prepared *Finnish folk songs* by Toivo Kuula and the *Sonata* by Telemann for performance. The teacher focused thoroughly on technical details using images and musical elements as tools for understanding. The introduction of the sautillé bow to the student was, after all, successful: The student was able to perform *Moto Perpetuo* on stage the by using her new bow technique after the recording of the third lesson (L3).

Figure 6.1 provides an example of the process of intensity ratings in lesson 1. The intensity ratings by the teacher varied from 30% up to 95%, while the student's ratings ranged from 30% to 70% for the same lesson. The teacher commented on her ratings:

T: In the beginning it was rather low, because we didn't get in the theme of the lesson (30%). But then it rose to 60% quite fast. The student was listening and playing" Then it rose to 70%, when we started to talk about her shoulders. She had practised the sautillé and could apply the thumb immediately (80%). The use of thumb is my own invention. She had practiced the

²⁴ Voiceless refers to the method of voices (R. Engeström 1999b), which I introduced in chapter 3 and adapted further in chapter 7.

exercise, and I let her play; for once I could shut my mouth. I was satisfied to myself, because which is important I let her play the whole piece through.

The student agreed (the student did not know about the teacher's rating when she did her own!) with the teacher's 60% in the beginning. Then she rated 40% and 30% while the teacher rated 70% and 80%. The student said that she assessed how she was listening and reacting in her playing. According to her comments, she assessed how well she could follow the advice of the teacher. The information for the student was about a new bow technique. In the last four minutes of the sautillé exercise the teacher focused on technical details such as string crossings, the contact of the bow on the string, length and speed of the bow:

T: This section was I would say 100%, let's say 95%, because I gave her such a heavy baggage of information. But I saw she could manage it. Still I ask whether I let her play too little or not?

The rating by the student was first 40%, which she raised for the last 20 seconds to 50%. These numbers reflected the fact that she was not sure whether her performance of the technique was correct. In the end she was obviously more secure in her playing. In the change of the musical material the object of action was momentarily on the music. The student's rating was first 60% and then later 40%. The rating altered between 60% and 50% in the first five minutes, when she played through the piece of music and the teacher made some corrections on single tones, rhythms, and nuances. The student seemed to assess her playing effort: how well did she go into the music. The piece was new to her so she was holding back a little.

The teacher rated 90% for the first five minutes and 95% for the last part of the working session. Her interest was to let the student play:

T (to herself): I let her play the Kuula long enough.

The teacher was very much aware of the fact that she was energetic and active. Her idea was to transfer the same emotional and musical vitality she herself possesses to the student. She was concerned about the balance of the lesson intensity.

T: Maybe here intensity was too much; exceeding effort. For her sake I shouted 'lighten up' to myself.

Actually the teacher was holding back a little:

T: I am usually very good at fooling around, but I thought as this was the first recording session I could not dance in the lesson now (...).

Nevertheless, she thought that the things that she wanted the student to learn were introduced and elaborated upon in the lesson. She was also happy with the way the student played and performed music and violin playing. In that sense, the lesson represented her idea of teaching the violin.

T: I thought this was a very good lesson.

The recording still made a difference, which means that the lesson wasn't a normal lesson. There was obviously some extra energy in it.

T: Not every lesson is like this, I had the feeling, that I should have a little mercy on her. Maybe there was too much trying out.

Lessons L5–L8

The stimulated recall sessions for lessons L5 to L8 took place after a considerably long time after the video recordings of the lesson. Table 6.3 demonstrates that the student watched the videos of the two first lessons after almost two years and that the teacher watched, commented, and rated the lessons after more than six months to one and a half years. As an exception from all other lessons, the teacher did not have a chance, for technical reasons, to watch lesson L5 and L7.

Lesson	Recording		Dates of stimulated recall interviews		
	Date	duration	teacher	student	observer
L5	19.11.04	0:27:31		25.8.07	15.10.07
L6	16.4.05	0:53:30	12.12.06	26.5.07	
L7	1.2.06	0:32:42		25.8.07	18.8.07
L8	13.4.06	0:50:25	18.12.06	25.8.07	18.8.07

Table 6.3: Recording dates of lessons L5–L8

The four violin lessons (L5–L8) covered a rather long period of work by a female teacher and a girl who was 16 years old at the time of the first lesson. The last stimulated recall interview was two and a half years later. By that time she was already studying with another teacher. The relationship with her former teacher had been very close.

St: Our relationship was similar to the relationship of a mother and a child. I thought in a negative way on my playing. I made these stupid questions, kind of wanting to win time or something. Maybe I had had a bad morning or something.

I remember the situation. We might have had some disagreement with my mother.

T: This was not the worst teenage period.

This period in her life was more or less beginning of attachment to the violin playing. The next year was already more on the side of serious studying of music and playing. (...) The year was difficult, because she had a boy friend in another city, and she had fights with her mother and so on. It was a very windy year trying to focus on the violin playing. Sometimes she didn't live at home for example.

Because of her life situation, the student is now beginning her professional studies in violin playing in another city. However, she has played in the concerts with the old teacher during the spring 2007.

T: She wanted to come and play in my student concert this spring. Also her mother plays the piano, so the accompaniment was no problem. It was very nice that she came and played. Her playing has developed clearly as I expected.

St: My relationship now with the new teacher is quite different than (it was with my former teacher) in these lessons. Maybe I have grown up a little since those times. I haven't said "joo, joo" once in my lesson during the last year. I have a different kind of volition and insight for the playing than before.

In the recorded lessons they mostly played Mozart. In the first lessons they worked on the *Adelaide concerto* and then later on the *G major concerto*. The student commented on the change in her way of studying now after the recordings. The new teacher gave her more independency, whereas she felt secure and close to her former teacher.

St: I think my teachers have a different kind of conception on the program we play. My former teacher thinks that I should play less music with better quality. The other teacher lets me play more and the technique is getting better along the way.

The former teacher had the idea of working, in which she seeks for the technique through touching and feeling. It felt close, and that she is interested in how I feel.

Now I need to work more on my own.

Would you still like to work like this?

St: No not really, I think now I find after all the way best on my own; not necessarily with a teacher. Still I think it would be quite exciting to work with her (the former teacher) now after this year.

The student started a new concerto with the new teacher. The former teacher would not yet have chosen this concerto.

T: I may not have chosen the Mendelssohn.

Was the *Concerto by Mendelssohn* too difficult?

T: Yes, in the perspective of the cultivation of the expression it is not now the easiest kind of music. I may have taken more small pieces and etudes for the purpose of practicing the double stops and other challenging stuff. This would have been closer to how I would proceed in her case.

As an example, Figure 6.2 illustrates the intensity ratings of lesson 7, recorded at 1.2.2007, in which they played *Legend by Wieniawsky*.

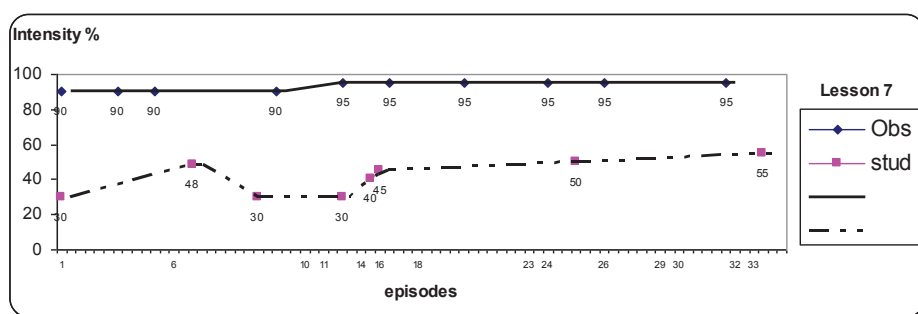


Figure 6.2: Intensity ratings Lesson L7

The student commented on her left hand technique, on her moody attitude affecting the lesson interaction, and on her bow technique as follows:

St: The position of the left hand was awful; I have changed the positions of the hand. I was in a master class where the teacher abused my left hand position totally.

St: This is awful (in the beginning); I just show my bad mood to my teacher all the time. I look at the walls when she is talking to me...
The interpretation stays inside and doesn't come out of me.
She tries to get the ideas out of me so that the music would sound more interesting.
It is not really easy if the student shows sad or tough face all the time. How can anyone be positive in such a case? Perhaps the stories are just for that kind of case.

St: I am pressing the bow too much. It was actually her message she tried to put through to me. I should relax more.

The student commented on her ratings quite critically:

St: (At 14:21) 50%, it was a little better. I would give over 60 if both would evenly talk and the student would search for herself for the solutions, interpretation, and how to express.

St: (At 15:56) humoristic attitude, more volition to play well, concentration, getting close to what the teacher is searching for.

St: (At 23:00) 55% good common understanding.

According to the comments of the student, she seemed to have no difficulty in focusing on how she experienced the lessons despite the considerably long distance between the actual recording of the lessons and the stimulated recall sessions. She could remember the feelings she had in the lessons. However, the maturity she had gained meanwhile enabled her to assess the situation and herself in it from a distance.

Lessons L9–L11

Lesson	Recording		Dates of simulated recall interviews	
	Date	duration	teacher	student
L9	12.12.06	0:29:36	21.3.07	21.3.07
L10	19.12.06	0:26:49	29.3.07	29.3.07
L11	23.1.07	0:39:29	28.5.07	28.5.07

Table 6.4: Recording dates of lessons L9–L11

The teacher and the student watched, provided intensity ratings and commented on the three lessons together. They also discussed the ratings while watching the video. The stimulated recall interviews were carried out within a six months time scale (Table 6.4).

In the lessons L9 to L11, I recorded instructional interactions between a male violin teacher and a teenage (14 year old) boy. They worked on an exercise, the first movement of *the Bériot Concerto*, and on a *Sonata by Vivaldi*.

The music was new to the student, and he played those pieces for the first time in these lessons. However, since the first and the third lesson contained working on Bériot, some continuation or progress could be observed in their working, and in their relationship.

In contrast to the violin lessons L1–L8, their working relationship was at quite an early stage: The student had started with the teacher during the ongoing school year, therefore, they were both still searching for the best ways of cooperating. The teacher commented how

unsure he still was about what really would be the best and the most effective way of proceeding with this particular student.

T: I am not sure what will become visible out of this way of working later on. Is this way of working reasonable in that sense? If both of us are fed up with the activity, maybe it would be reasonable to quit for that session or maybe not. I don't know. This is the matter I have been unsure of since fall and also during the spring season. You are a talented boy, but still I think our work at the lessons doesn't seem to create the results that one would expect, and I particularly would hope. I haven't really figured out why not. (Stim.21.3.)

Also the teacher discussed the way, in which they could produce the most favorable outcome. The results did not come as quickly as he would expect and hope for. The emotional and cognitive tension or feeling of frustration was evidently present in the lessons as well as in the stimulated recall sessions.

Due to this short time together, their discussions often focused on the teacher student relationship. Their roles, ways of working, tools or objects seemed to be purposely under elaboration in the lessons. The student did have opinions of his own about music and life, but he seemed to be unsure of how much or in what way he was allowed to express them. The teacher gave him space to talk, while challenging him at the same time with the urgent topics on music and practicing.

St: (...) I didn't have so many opinions in those days

T: It is hard to believe you didn't have any opinions then (...) Yes, this is kind of the first (piece of music) in which it is possible to think about musical character.

St: But it is not yet ready ...

T: Yes but it doesn't necessarily mean we couldn't have opinions how the music should go, or how it should sound like.

The following discussion illustrates the process of considering intensity ratings for lesson L9. Firstly, their orientation was towards the rating scale and their work in general. Initiatively, tentative hesitation characterized the discussion.

T: You say first. How would you describe the interaction by intensity?

St: Our lessons are always very intensive.

In order to enable the teacher and student to focus on a particular moment, I commented:

R: So your lessons are highly intensive to start with. How was it at this particular moment, or period of the lesson?

T: Was it ordinary or more terrible than ordinary?

St: I must have thought about the camera.

T: It was the same to me, because I am not used to having a third eye watching in the corner all the time. The fact that the camera was there, even though you (the researcher) were not always present, changes the situation somewhat. Anyway I think in these lessons there was not much loose or idling in our lessons; only waiting to see if something would happen.

Secondly, they pondered what intensity means. High intensity for the student was a full involvement in one thing. Rather than pointing out the momentary feeling or concentration, the teacher also emphasized the results.

St: Maybe 100% would be that one would forget about everything else.

R: So what do you think in this case from 0 – 100 percent?

St: 80 I would say

T: 75 % in 45 minutes, considering all the disturbing elements surrounding the lesson, it is rather good, and the density is rather high. But is it good, does it produce results and does the density mean that the student is all the time waiting for the scorpion to attack. Does it produce learning or traumatic experiences overall? I don't know how this kind of number in percent can be grounds for arguments on student learning efficiency or for anything else.

But if you are surveying intensity first by itself I will give 75%.

At a point when they started to work on the musical expression, the student hesitated because he thought his playing was not yet on the level of dealing with musical matters. The teacher took the opportunity to reflect on their work. He wanted to emphasize musical ideas.

St: This piece of music was not at so good a stage or level that I could say anything about.

T: I don't see any constrain or conflicting ideas here. Would it be bad if we would think in beforehand about some musical thoughts and so on?

St: No, certainly not. We just didn't have such music in which it would be possible to work like that.

T: Yes, this is kind of the first in which it is possible to think about musical character.

St: But it is not yet ready ...

T: Yes but it doesn't necessarily mean we couldn't have opinions how the music should go, or how it should sound.

After the hesitating and pondering on the process of the rating system they gave their percentages (Figure 6.3).

T: what direction did you go?

St: down 60%

T: I'll put 78%, slightly up.

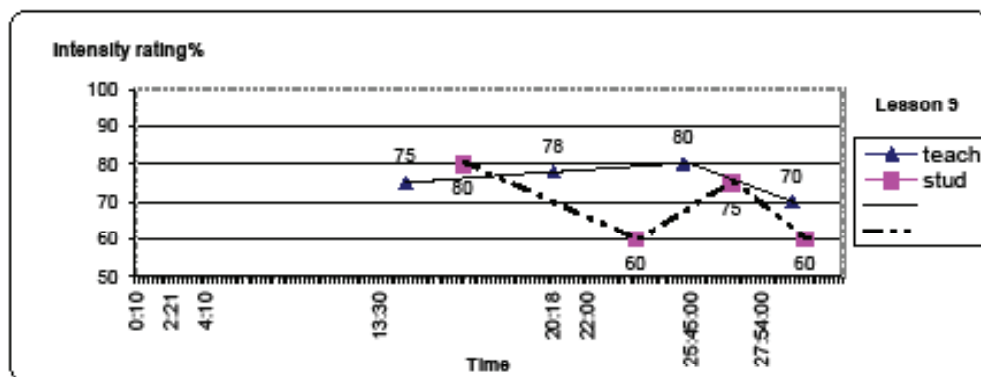


Figure 6.3: Intensity ratings in lesson L9

They presented their respective rationales concerning the ratings, as follows.

St: I was more intensively present in the former section before this.

T: He was earlier more present, when we discussed and practiced the shift.

T: Well I tried to push him towards a not so conventional direction at this stage. I think we had not once talked about this kind of musical things we tried to cover here.

St: So you think this was more intensive for you than it was to me. I was just trying out “lets do this way!”

T: Yes, but you were first time on a strange musical field.

St: Yes, in the exercise I was more there, and you gave me more specific ideas, I kind of asked you to make my technique better...

The bargaining of the ratings started.

St: I started to repent the 60% just after you put it on (in the end of the 4th page) it was more...

Here I would give 75%

T: I'll raise to 80%, because the student is starting to come along, although I don't push so much now. Is it like that in your opinion?

Ratings at the end of the lesson:

St: 60%

T: 70%

T: (The ratings form a) kind of slur, maybe more like a camel with two humps

St: Yes when we moved to the next thing

T: I think the loosening happened, when I started to dig out how these different stages would be; it felt bitter: “give me the same delicious Bona again...”

Methods and attitudes for rehearsals became central in their discussions. The student's preparation for the lessons seemed to strongly influence the atmosphere and the way they

worked and talked about their relationship, music, and violin playing in general. The topic of preparation and practicing emerged in every lesson and stimulated recall session.

T: I agree, maybe this is also to learn and warn: if you want to practice only in the lesson, that is fine, then we practice only in the lesson.(...)

St: Yes, but I should be able to do it alone; since I have anyway played the violin a couple of years I should be able to do it without the teacher.

T: Yes, but what if it doesn't happen

St: Then we are like this

T: Yes, then we are like this, and then emerges also the question of how you practice, not only that you are spending this and that much time being busy with the instrument. What are you actually doing there so that the time you spend with the instrument will end up to favorable results? (Anyhow) for the purpose of learning how to practice it can be fruitful to go through notes and other basic things during the lessons.

An exception was the lesson (L10) with the *Sonata by Vivaldi*. This music seemed to fit the student perfectly. He had practiced for the lesson and for the coming concert. He took initiative and demonstrated good musical self-confidence in his playing.

St (C): I think this is fun, enjoyable, it develops, I concentrate, I think this is what practicing should be.

T: I agree, (...) This is technically easier than the Bériot. He has played this kind of style earlier, and some things have developed in the Bériot, which are now easier in this piece.

St: Much, much easier

T: It became ready much quicker so that you could perform the piece.

St: Practicing was much more fun.

The student was comfortable with the music, which was technically accessible. The urgency of finalizing the music for the coming concert also seemed to stimulate the lesson.

Lessons L12–L14

Lessons L12–L14 were recorded in the autumn of 2006; while the stimulated recall interviews took place about six months later (Table 6.5).

Lesson	Recording		Dates of stimulated recall interviews			
	Date	duration	teacher	student	observer	observer
L12	28.9.06	0:39:29	7.4.07	21.3.07	21.3.07	
L13	2.10.06	0:06:29	7.4.07		21.3.07	21.3.07
L14	12.10.06	0:42:06	7.4.07	28.3.07	28.3.07	

Table 6.5: Recording dates of lessons 12 - 14

In these lessons (L12–L14) a female teacher worked with three different students. Two female students were studying professionally, and the male student was under school age studying violin for his first year. The teacher watched the lessons separately, whereas the students watched, commented, rated the lessons and discussed different ratings together. The student in lesson 13 was only 6 years old; therefore he was not asked to rate his lesson.

The other female student (L12), who was in the third year of her professional studies, was preparing for an exam; therefore they concentrated on several key points in the lesson and also played the music through. They played double stop exercises, and the challenging staccato passages in *Wieniawsky's Polonaise in A-major*. One of the topics was how to relax in the staccato technique. Finally they worked on two movements of a *Sonata by Beethoven*. This musical material offered quite varying and demanding challenges for the student and the teacher.

Their work was fluent and mainly focused on the tasks and on the music: They talked with short sentences and sometimes with only few words or with none at all.

- St: A little earlier when we spoke not so much, taking turns in playing, not so much with words.
- T: I didn't have to explain so much to this student, because she already understood what things were important.
- St: Both had a clear goal what to aim for. Both had a concrete place, which didn't work and tried to solve problems to reach what we wanted in order to make it better.

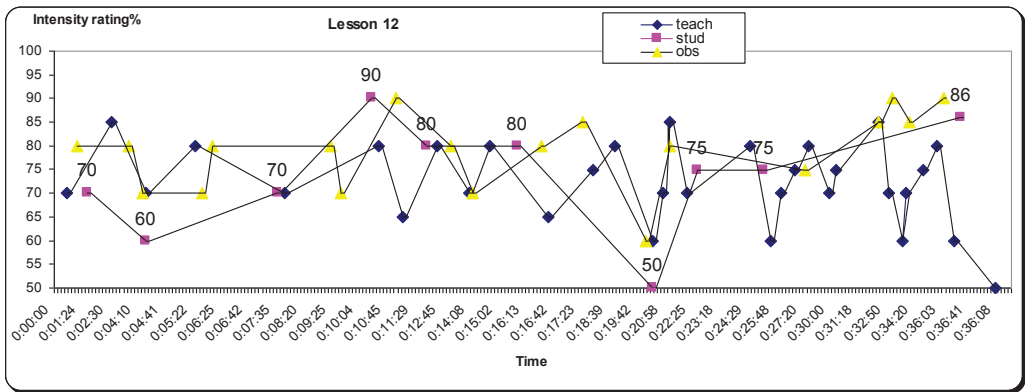


Figure 6.4: Intensity ratings in lesson 12.

At the beginning, the teacher seemed to be more active while the student concentrated on her own playing (Figure 6.4). The student commented on her concentration and their communication. The teacher was hesitant and critical about her own playing.

St: First I thought more about my concentration, which was at the beginning quite good, maybe I was overdoing things at the beginning. It was hard to think about the interaction so much. At 3 or 4 min I started to relax and both of us were present with intensity.

Later on my concentration weakened, and she (the teacher) started to give more and more and I was not able to receive it all at around 7 or 8 minutes. Then my concentration was better at 9 min.

At 2'30'' the teacher rated 85%, because "communication is working". At 4'20'' she gave 70%, because she looked at the music.

T: The fact that I hadn't practiced this piece of music so well caused lower intensity.

They practiced the staccato places in Wieniawsky. One of the topics was how to relax while using the staccato technique. They both experienced the intensity rising. The student appreciated the music making without too much talking and that she was able to respond by playing.

T: This was rather plain 70% until 10'30'' when there was a change. She succeeded to find the way of doing the exercise.

St: At 10 min I thought here was maybe the highest point of intensity, because it was more playing than talking, and I could respond to the things she was saying. I understood the instructions better at that situation.

The teacher experienced the following explanation (episode 11) as 65%. However, the student thought that the intensity stayed at 80% while they were talking.

St: I don't think the intensity went down while we were talking, we just did different things.

Their ratings varied mainly between 70% and 80% when they worked on the places in the music. The teacher explained her ratings by her actions, considering how communicative they were.

T: (12'25'') 80% we were communicating more to each other; earlier she spoke more to herself; 65% explaining; (18'45'') we get to the point again. I showed at the same time she was playing; (19'51'') 60%, because I was looking for the piano part; (21'35'') 85% she was playing again; 70% I asked whether she got something else in her mind. (organizing); 80% I showed the octaves.

The same kind of working followed with the Beethoven sonata. They both experienced the rising intensity during the first two minutes. The teacher gave 80% and the student 90%.

T: (27'20'') 80% when I played along; (29'40'') 70% I messed with the accompaniment; (32'17'') 85%, because we didn't have to say anything, we just played.

At 33'05'' the student missed some notes and took the place over again. She shook her head.

St: I became tired, I didn't have enough strength to be in the situation any more.

Both gave 60% at that point. Two minutes later both gave 80%, because the student could easily perform the vibrato.

T: I showed the vibrato, which was an old thing,

At the end, the intensity by the teacher was around 60%, because they talked about other music that she was about to play. The student gave 86%.

St: Now we just talked and still I thought the intensity was high.

The other female student (L14) was on her second year of her professional studies. They worked on scales, on an etude, and a *Solosonata by Telemann*. Their work was mostly about the basic physical, musical, and technical matters. The teacher applied several didactical tools in the process of, in the teacher's words, "opening up" the girl, because she was sometimes "in her own world".

T: I am present but she is not. If she had been present she had been much quicker in correcting the intonation. She remained playing the thirds like that.
(...) she was just in her own world.

St: I was thinking about so many things, it was good; the intensity was very high and then came the snap in my brain. I like to work like this. It was a rather long period of time of intensive working.

However, the teacher didn't think it was only bad that the student was in her own world sometimes.

T: We have to remember that the lesson needs such calm periods, when I am not pushing.

The young boy (L13) had just started his violin lessons; therefore everything was on a kind of introductory level. The language of the teacher was full of images. They worked physically very closely to each other. Two observers watched the video of this lesson (L13), giving comments and intensity ratings. They were students of the other two lessons (L12 an

L14). They paid attention to the fast and rapidly changing actions in the lesson and the focused work of the teacher and the boy.

Obs(L14): The working with a child needs to be fast with short comments and impulses. (...) Here it is a different matter whether the intensity is higher when talking or only when playing, because with a child you have to explain, or clarify so many little things. The teacher didn't actually explain so much, she was teaching more, showing how to play and doing things. He is quite a quick boy, but he stayed nevertheless very well at his place.

Obs (L12): Considering his background he is concentrating very well in these lessons. He has some problems with concentration in school.

Lessons L15–L16

The stimulated recall interviews regarding the vocal lessons were all within a rather condensed time scale (Table 6.6). Each participant watched both of the lessons separately. Students also commented on each other's lesson. Additionally, we organized a kind of Learning Studio (Lambert 1999), in which the teacher, students, an outside expert and the researcher commented and discussed the lesson interactions.

Lesson	Recording		Dates of stimulated recall interviews			observer	T/st/st/ obs
	Date	duration	teacher	student	observer		
L15	4.12.06	0:54:30	12.12.06	25.1.07	25.1.07	7.2.07	9.2.2007
L16	4.12.06	0:37:41	12.12.06	25.1.07	25.1.07	7.2.07	9.2.2007

Table 6.6: Recording dates of lessons L15–L16

The two vocal lessons (L15, L16) were quite different from each other, because of the background and situation of the students. The other student was originally from outside of Finland, and consequently, she was used to a different kind of educational culture. She was preparing a concert program for an exam shortly; therefore she sang her music through and worked on some key points. The latter lesson consisted of voice training and introduction to a Finnish Christmas song. This student had just arrived from a trip to Moscow, which affected the lesson. The teacher commented on the differences, accordingly:

T: There is a difference between the two lessons. The latter student is more actively present, she was teaching herself more actively. The matters were different. The latter [student] is more

equal, and doesn't wait for me to pour the wisdom on her. There is a cultural difference. The first student may think she is not able to know how the things are. She had no choice other than to receive the last minute advice (for the coming exam).

While pondering reasons for the differences in the interaction of the two lessons, the teacher pointed out the activity of the latter student and the cultural effect in the first lesson. The first student (L15) sang a series of *Russian songs by Mussorgsky* because of the language. The choice for this particular music was the teacher's initiative.

T: The choice of the music was mine. I learned that she knows Russian well, because of her background and she has always sung best in the language she knows well; she gets hold of her own technique.

The student commented on the feedback as well. She felt somewhat confused when she received praise from her teacher. The teacher had chosen to praise her, because the exam was coming shortly, and encouraging seemed obviously important.

St (L15): When I had sung my songs and you gave me plenty of praising, I was still waiting for the critique behind the good, wonderful, excellent – comments. I didn't feel that the praising would have increased the feeling of succeeding in my singing.

T: But if the praising is left out the critique gets very depressing. The balance between praising and critiquing is so difficult. I remember from my own studying (that I was thinking): cut the crap. Just tell me what I can do better.

St: There is a difference between praising and praising: it can be spurring on or it really means that the singing was good.

T: In your lesson for example although I was very impressed on your artistic contribution, I was careful not to praise you too much. I remember praising you up to your toes, and for the next everything was falling apart. That is why I tried not to praise you too much.

They both felt that the atmosphere of the lesson was very intense. Their effort in the interaction and musical problem solving was higher than normal, because of the situation. Their work was reportedly influenced by the camera and the researcher behind it. The exam was also shortly coming up for the student in the first lesson (L15).

T: The intensity of the interaction during the whole lesson was high almost all the time, although you didn't seem tired at all. Still how did you feel, was the lesson too tight?

St (L16): I guess I concentrated more now than normally because of the camera. It also depends on the day. This time I didn't feel tired.

T: Normally I am not as good a teacher as it seems here. I don't believe this is the normal level of my teaching, because I had to convince not only the student but also the camera and the person behind it. This lesson is a lucky strike. We both had a good day.

Similarly with some of the previous comments on the violin lessons, the student sensed strongly sensed the presence of the teacher.

St (L15): She was present all the time. I didn't watch at her, but I felt her presence. (...)The lesson was not typical in the sense that the concert was so close. Obviously the teacher wanted to be supportive. She said "good". One has to look beneath the words just to understand what she really was saying. (...) It is more up to me to be able to receive what is said and meant in the lesson. The question is, am I active or with her.

The teacher thought the students didn't expect the interaction to be so balanced or symmetrical to start with. In her opinion, it could have been more communicative at times.

T: They expect us to give criticism: "Say now, particularly, say the 'buts'!" Feedback situations should be separate from the normal lessons. Of course they should or could be more like conversation. Only my temper seems to roll over (...).

The teacher and the students paid attention to the active reciprocity in their work during both of the lessons. The general atmosphere of the lessons was spontaneous and open.

T: I liked the hum [bubble] of the speech, which meant that I was not the only one who had the possibility to speak.

St (L16): I think she understands me from inside, and there is trust between us.

At the second lesson (L16), they spent a lot of time letting the student search for the right muscles in the voice exercises. The teacher was delighted with the potential effort and peace the student showed in the lesson. The student also showed gratitude for the time spent on searching for the right muscles in the sound production.

T: It was possible, because she was brave, and ready, and she had a bright and positive day.

St (L16): The difficult thing is to work with muscles you don't really feel that much. This is a familiar situation, which I have often experienced.

(...) I don't really feel it. I just do what I'm told to do, and for the rest I just trust that everything goes right.

Both the student and the teacher expressed in the interviews that they experienced the special character of their relationship. The student commented on the importance and the character of the nonverbal communication they had in the lesson.

St (L16): I think she understands me from inside, and there is trust between us. (...) She is so full of mimics that I can tell just by watching at her face what she is saying. She may just lift her eyelashes, and from that I will know what to do.

By playing the piano almost all the time in the two lessons, the teacher supported the music making nonverbally. Her tools were harmony, rhythmic patterns, and dynamics and tempo changes. The teacher didn't show so much by singing, because as she emphasized, her

voice level, mezzo soprano, was somewhat different than the students', soprano. She didn't want them to imitate her too much.

St (L16): She doesn't sing and show so much how it should be. I think it is quite enough. I get some things from her, but still I don't start to imitate her. I get the feeling how it feels. It is good she shows at least something.

T: Her own vision of the interpretation is the most important.

The observer (the teacher at lessons L12–L14 thought the vocal teacher maintained intensity by being present, and forced the students also to be present.

Obs: This was an easy case, because it was so intensive all the time. She was supportive, positive, and determined. It is good they had some breaks because nobody can sustain constant high intensity without some breaks. The intensity forms a natural curve.

Lesson L17

The flute lesson (L17) took place on 6.2.07 and the stimulated recall interviews were at during the same spring 2007.

Lesson	Recording		Dates of stimulated recall interviews			observer
	date	duration	teacher	student	observer	
L17	6.2.07	1:01:06	13.3.07	13.3.07	13.3.07	
			20.3.07	20.3.07	20.3.07	
			31.5.07			31.5.07

Table 6.7: Recording dates of lesson L17

The teacher and students watched the videos together. However, the students wrote down their ratings separately later on the transcript. The teacher watched and commented on the video for the third time with an observer (Table 6.7). Both of the flute students study professionally. The male student studied for the first year and the female for the second year with this teacher. The teacher had organized the lesson so that both students worked in the lesson at the same time together. They had worked in pairs for couple of times also in earlier lessons. However, the students had not studied in groups before during their professional studies.

T: I think two is a rather good way of doing it. If there were more players it would be more difficult, because some scattering factors could come along.

The teacher found several benefits of the pair lesson format. The increasing variation of interaction seemed central to her.

T: We have done it a couple of times and I have noticed that both are more concentrated and active. Also the other player gets support and at the same time inspiration from the sound of the other to his playing. I felt it was more fruitful and more intensive than if I were alone with the student.

The teacher had chosen the two students carefully for the session. She thought that their character, both as people and as musicians, supported each other.

T: I purposely chose these two. The boy is a peaceful philosopher and the girl is very temperamental so the boy's role is to balance up with the girl, and the other way around. Also their sounds are different. The girl has a bright controlled sound, and he has a big wide sound, in which we still seek some focus. So I think they get things from each other.

While discussing the sound production of the male student's flute playing, the teacher pointed out that he had made radical changes in his sound production technique.

T: For the record, he made a total change in his technique three months ago. To me this is fantastic, I couldn't hear any problem.

St (J): Technically, I had produced sound asymmetrically with my face.

T: He has done the basic change with great patience, and so rapidly.

St (J): Sometimes the sound didn't come out as I had wanted to, and there was some tension in my facial muscles.

T: The work starts from the whole body, the position of the legs and hips. Earlier the articulation was unclear and now it is much better.

They played warming up exercises first and then flute solos from the *Fourth Symphony by Brahms*, *Carmen opera by Bizét*, *Wilhelm Tell by Rossini*, the *Prélude à l'après-midi d'un faune (the Afternoon of a Faun) by Claude Debussy*, and a *Scherzo by Dvorak*.

The teacher used several times the word "energy" several times during the lesson. In the other lessons, the participants referred several times to energy as well, as a technical, musical and physical conception. Accordingly, energy seemed to refer in this case to the combination of all criteria of the conception.

T: Energy is the speed of the air flow, which makes the sound production easier.

(The purpose is to) relax spiritually and use your body as a whole. This is important particularly to wind instruments, because like if we don't have it in playing pianissimo it loses the tension and it is not interesting any more. Isn't it the same with cello?

Like in Brahms where you should have the sensitivity, but if the speed is not there the playing becomes too careful or tense.

The teacher referred to active pianissimo playing. This resonates with what she said earlier about silence or listening as characteristic to Intensity of Interaction.

Lessons L18–L22

The cello-group lessons took place in spring 2006 and the stimulated recall interviews were made separately, first in May 2006 with the parents, and about a year later with the teacher and two observers (Table 6.8).

Lesson	Recording		Dates of stimulated recall interviews			observer
	Date	duration	teacher	parents	observer	
L18	28.1.06	0:16:56	20.3.07	27.5.06	20.3.07	20.3.07
L19	4.2.06	0:32:42	20.3.07	27.5.06	20.3.07	20.3.07
L20	18.3.06	0:25:28	10.5.08	27.5.06		
L21	1.4.06	0:23:09	20.3.07	27.5.06	20.3.07	20.3.07
L22	22.4.06	0:22:58	12.10.07	27.5.06	12.10.07	12.10.07

Table 6.8: Recording dates of lessons 18–22

The observers commented and asked questions while watching the videos. The teacher and observers provided the transcript with ratings. However, I included only the teacher's intensity ratings into the data collection, because the ratings by the observers were only general and constantly high with no exceptions.

Both the parents and observers were overwhelmed watching the work of the teacher and the play of the children. The tempo of the interaction was extremely fast with short episodes and rapid changes; therefore, while watching the video for the first time, one could easily miss and omit details of the musical and pedagogical dialogue. Consequently, due to the difficulties in identifying distinctions in the communicative flow of the lessons, the altering intensity rating curve was evidently not a primary interest of an observer.

The cello lessons were for a group of eight four and five year old boys. Not all eight were present in the lessons: some of the boys attended the group lessons at different times²⁵ (see Appendix 1). One lesson was also in a different classroom. Therefore, each session had a slightly different set up each time. For every lesson the teacher also used quite different means and imaginative methods directing the musical activity.

However, the music, basic principles and rules, and the pedagogical approach were the same. She said that it was important for their interaction that the boys and the teacher had learnt to anticipate through familiar signs what was coming next. The boys knew that certain basic routines like tuning, bows, preparing-playing, listening-singing, and surprises would happen over and over again at the lessons.

The parents were always active with the boys in the lessons; therefore the parents also watched the videos and made general remarks. Their cello playing had started at the fall before the recorded spring. However, earlier experiences from playing musical instruments were available. Some of the parents and sisters played musical instruments, also other than cello, so the musical culture had been in their lives at home and in their sisters' lessons, which some of the boys had visited. The parents had also already gained a lot of experience and knowledge for assistance at the lessons.

Parent: It is certainly easier to start playing in a family in which someone already plays an instrument.

T: It is wonderful to see how the experienced mothers help the young ones, not disturbingly but enough. They do it without my initiative.

The parents also commented that their participation had emotional importance as a support for the children.

P: I think it is good to have the parents along in the lessons, because the boys get the feeling that it is a really special time just for this child.

Most of the main pieces of music in the lessons were from the Suzuki books. Accordingly, the method offers the principles that the teacher uses in her teaching. In spite of this frame, they sang and played a great variety of children songs during the lessons. Furthermore, her approach to the lessons was open and free for improvisation. Playing around musically and technically, emotionally and imaginatively occupied the young minds in every lesson.

²⁵ L18 (Lesson 18): 6 boys; L19: 4 boys; L20: 5 boys; L21: 7 boys; L22: 6 boys

P: It is great how she creates such artistic performances out of these little children songs so that the boys eagerly wait for their turn to play the open A or D in the music.

T: I have decided not to stick to any prepared formulated plan. Moreover the plot of the lessons is a surprise. It is indeed a fragile balance how to handle chaos; sometimes it works, sometimes not.

The ratings by the teacher confirmed the unexpected turns in the course of the lessons. The lessons, however, were under her absolute control. By being alert and sensitive to the changing moods of the students she could anticipate and guide the young cellists. The comments on the ratings illustrate how she actually used the altering curve of intensity in their teaching and learning strategy.

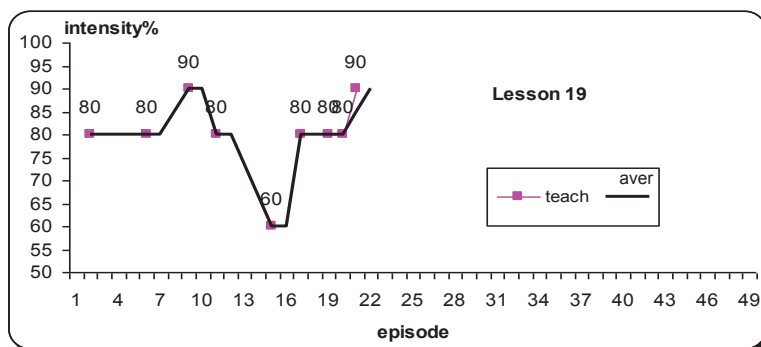


Figure 6.5: Intensity ratings in lesson L19

The teacher thought that their communication by singing and playing the games by body motions worked at the beginning of the lesson (Figure 6.5).

T: 80% at the beginning. We were singing together, cooperation, and also the interaction between the boys was good.

The group was smaller at lesson L19: four boys were present. Therefore, the teacher made a quiz by asking and playing with the names of various musical notes. The children were actively present, rapidly answering to every question. However, characteristically, the ratings went down from 90% to 60% when the teacher continued asking the actual names of notes.

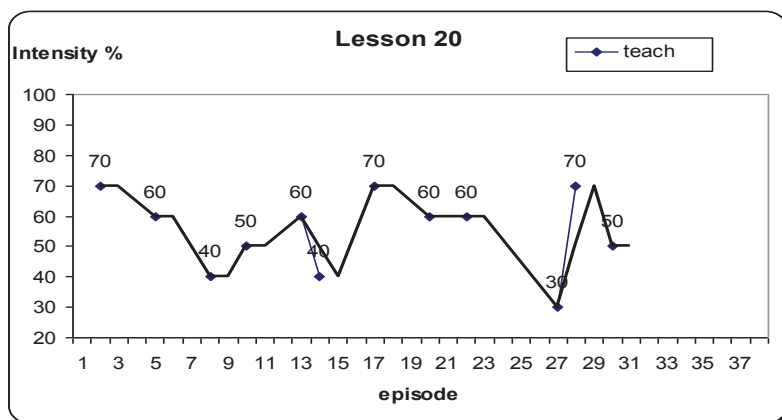


Figure 6.6: Intensity ratings in lesson L20

Figures 6.5 and 6.6 demonstrate how the teacher added complexity, more notes, fingerings, bowings, and dynamics for the boys to play and learn. This strategy was evident in all of their lessons (L18–L22). As Custodero (2002b) argues, adding of complexity in balance with increasing competence facilitates flow. However, the complexity was not the same for all of the boys. Some of the boys, according to comments of the cello teacher, were fast, some slow, some had missed the last lesson or two, some worked more at home than others. As an effect, adding complexity and new musical material to learn caused the Intensity of Interaction diminish.

T: The slow boy doesn't bother me at all, as long as it doesn't bother himself. My only concern is that he would get along with the others. He plays what he can and has the time for. When he plays alone, he knows the songs very well in his own tempo. But the whole group can't go with his slow tempo. He is with the music anyway.

The sharp valleys in the graphs of Figures 6.5 and 6.6 illustrate the fast reaction after gently sloping periods. The interaction of the cello boys and their teacher recovered persistently each time by altering the approach and proximal goals and targets. Usually they returned to something which was familiar to the boys and easy to perform. The teacher commented that surprise, quick changes in the lesson plan or just talking freely and not pushing through with something previously planned material are her survival methods. After

all, these sudden changes within periods of Intensity of Interaction turned out to be interesting for deeper understanding of their interaction.

6.4 Summary

The examples above demonstrate the variety of experiences that the participants commented on while they gave their ratings. Consequently, the ratings illustrated a rather complex combination of physical feelings, emotions, and elements of pedagogical and musical communication. While the altering tendencies of the observed and identified intensity ratings illustrate the perceptions and interpretations of lesson interaction, they leave quite a few questions open. How were some periods of interaction different from others? What kinds of musical and pedagogical meanings can be found in these periods?

In order to be more specific regarding what actually occurred in the interaction of the lessons, the following chapters will combine discussion of the intensity ratings with the musical and pedagogical meaning construction. For the analysis of the teacher-student meaning construction in instrumental music lesson contexts, Chapter 7 adapts and applies the Method of Voices (see Chapter 4). The multi-voice analysis of each situation combined with intensity ratings, in Chapter 8, offer directions and understanding of how significant or worthwhile the musical problem solving or expression was to the participants. These perspectives provide grounds to demonstrate general principles of Intensity of Interaction in each lesson or group of lessons.

Chapter 7

Results II: Musical and pedagogical meaning construction

This chapter examines Intensity of Interaction in instrumental lessons by focusing on the findings regarding teacher-student communication. While the present analysis focuses on each interpretive communicative element separately, they comprise a communicative whole within the perspective within the framework of Intensity of Interaction. Consequently, the everyday work of instrumental teachers and students consists of vital connections between musical and educational problem solving in the lessons, which creates a multifaceted context for teacher-student communication. In the frame of Activity Theory, both the teacher and student represent the subject of a musical and pedagogical activity system. R. Engeström (1999b) explains that activity systems are the contexts for communication in which voices evoke the social languages of a lesson. Social languages are socially articulated and shared determinations of a situation and interpretations of reality, which speech genres objectify and maintain. Speech genres are choices of topics and words, as well as different forms of discursive practices (see Chapter 4).

The adaptation of the Method of Voices in analyzing musical and pedagogical meaning construction was an elaboration process of its own. As a result of the adaptation process, the following presents descriptions and tables of the created applications. As a means of unveiling and understanding musical and pedagogical work, this chapter attempts to describe and articulate the dynamics of teacher-student meaning construction. Empirical framework and examples of this division into episodes serves to begin this chapter. The chapter continues by presenting and articulating the two dimensions of adapted social languages. Through the findings concerning objects and modes of communication, this chapter discusses their connection to Intensity of Interaction.

7.1 Division of the episodes

Consistent with the Voice Analysis, I divided the flow of musical, verbal, and nonverbal interaction into units of analysis.²⁶ R. Engeström (1999b) called them “episodes” in her study

²⁶ Recall the discussion of units of analysis in chapter 5.

of doctor-patient conversations. In this study, the division of episodes was based on contents of speech, music, playing music, body language, and collaborative communication. R. Engeström (1999b) defined the borderlines between episodes according to the change of topics in communication. However, she emphasized meaning construction and basically used three principles in her method of identifying topics: framework of the topic, speaking topically, and speaker's topic. Firstly, the framework unites the features, which are external, observable, and activated by the situation. Secondly, speaking topically means united actions in constructing the topic. Thirdly, several topics may construct a turn of speech by one speaker. However, in order to identify such topics as topics of a conversation, both of the speakers should take part in handling the topic. In the analysis of this study, the most significant borderline between different episodes was the commonly produced topics of speech by participants in the lessons.

The framework of the topic in instrumental music lessons consisted of describing the identities (teacher and student) of the speakers, the script, the nature of the lesson (such as preparing for a concert or an exam, giving feedback, performance session, warming up, rehearsing), the background information and expectations that the parties had about each other, and other recognizable matters. In the frame, I identified the change of a topic by the divisional terms such as "lets go on", "take it again", "now", and by summing up terms like "ok", "yes", "bravo", "good". Breaks and pauses for reflection also offered hints for the change of episodes.

These hints left several questions open for the analyzer. Did the episode change when they started talking about technical problems that accompany the musical and pedagogical problem solving? Or how did the episode change in relation to the construction of the personal topics and jointly developed topics of the speakers? R. Engeström (1999b) notes in her study that the change of one term alone may change the meaning of the conversation significantly for the speakers, and one term can change the topic as a whole.

As a basic principle, I divided the transcripts into episodes according to shifts in meaning construction and according to what was under elaboration during the flow of joint work periods. In developing musical phrasing or instrumental technique, the teacher's initiative was often followed by the student's playing. Sometimes the student played first and then received comments.

In the example below, the episodes follow the same script. Only the topics change: they focus each time on different technical or musical matters. In the last episode (12/17) the teacher continues on the musical idea of a crescendo with more focused technical advice.

The technique of marking episodes by numbers 17/24, 18/24, 19/24 (see Chapter 6) is borrowed from R. Engeström's study (1999b). For this study, the marking seemed convenient and concrete as well, because it refers to one episode as distinct from the other episodes, and still illustrates the location of each episode as well as the total amount of the episodes in a lesson. The episodes in the example are from lesson L3.

(17/24)

T: What happened? You lifted the arm too much. Now only small movement, don't lift your arm too high, when you go from A to G string.

St: (plays)

(18/24)

T: That needs a more firm beginning, lead the pianist

St: (plays)

(19/24)

T: That is the way, this is already much better. Now the fourth thing, do you notice the crescendos? Change the spiccato gradually, when you make a crescendo. That is art when you can do that.

St: (plays)

T: Those notes could be more on the string

St: (plays)

Apart from talking, the episodes in instrumental music lessons naturally consisted of a lot of playing, singing and body movements. The change of a topic often came just after or before the musical expression. The music either led to the teachers' reactions or the introductory statement led to the students' musical attempts. Following the principles described in R. Engeström's (1999b) study, I identified and named one voice each for the teacher and student in the episodes.

The analysis describes the information of an episode in the form of a chart or a sketch map (see Chapter 5 and Appendix 6). The columns show the number and duration of an episode, speech and action by teacher and student. Their voices are marked with abbreviations²⁷ and the intensity ratings in numbers of percent (IR%).²⁸ At this point of the analysis, the percentages illustrate merely the perceived momentary atmosphere of each

²⁷ Please, refer to the chart of the abbreviations in Appendix 7.

²⁸ IR%T, IR%St, and IR%Obs refer correspondingly to the ratings provided by the teacher, student, and observer.

episode. The tendency or direction of the intensity cannot be judged by just one number. The example in the Table 7.1 has two numbers for IR% below each other (ratings by the same person), which enable the interpretation of tendencies. The next chapter (Chapter 7) offers further discussion of the connection between the flow of the teacher-student meaning construction and the intensity ratings. The following excerpts demonstrate the output of the recorded, transcribed and analyzed data along with the analysis.

Epis	Dur	Teacher	T	IR%T	IR%St	St	Student
13/25	61	Minkäslaiset ohjeet .. mä näin joo justinsa, sä teet vielä sautille spiccato harjoituksia ensiksi, yritetään muistaa, tehdään kokeilu jossa kevennetään peukalolla vähän , eiks niin, sä harjoittelet tän detachena, kiinniolevalla jousella, niin että sä saat sen... pikkasen vielä puhtautta paremmin niin sulla on turvallisempi olo vasemmaln käden kannalta, kun se on riittävän haastavaa ajatella tätä oikean käden tekniikkaa. Hyvä.eli tämmöset ohjeet ensikerraksi tästä. lisää siihen pikkuhiljaa tempoa eli asteittain rupeat soittamaan sitä nopeammin. <i>[What kind of directions should I... first you'll do sautille excercises, let's try to lighten up the bow a little with the thumb, in order develop intonation practice this by detaché bow, it is hard enough for the think of the right hand. Gradually increase the tempo.]</i>	xpl/ body, tech, har, rtp/ mship	95		xpl/ body, tech, har, rtp/ mship	hymy joo [Smile, yes.]
							Joo [Yes]
14	32	Nyt mennään seuraavaan asiaan Kuulan etäpohjalaisia kansantansseja. Käydään vain tota Polskaa. Katsotaan miten sä oot saanut äänistä selvää, ihan hitaasti. Koskaan ennen ei oo soitettu. (Näyttää) ihan hitaasti <i>[Now we'll move on to the next, Kuula folksongs. Let's see how you found the notes, slowly. We have never played these before (shows).]</i>	xpl/ prf, rtp/ mcal+ mship		60	ctrl/ mship+ mcal	Soittaa [Plays]

Table 7.1: Transcript with Voice Analysis and intensity ratings of violin lesson L1

In Table 7.1, the episode 13/25 shifts to the next episode when they start working on things that are musically and technically totally different from the previous session, on the teacher's initiative. Clearly the object of the collective activity changed in this case. This excerpt also illustrates the analysis of social languages. In episode 13, the teacher is explaining the thumb lightening for bow technique, and saying that the use of the detaché bow will help the student to focus on intonation. The student should also increase the tempo gradually. Therefore, musicianship was the object of this episode (see definitions below in Section 7.3). The social language was the same for both of them, because the student agreed and joined the explaining by nodding, smiling, and replying “joo, joo...” [“yes, yes”].

In episode 14, the teacher explains how they would work on the next piece of music. “Let’s take only the Polska; we’ll look how well you have found the notes; slowly; we have never played this before.” The object was now categorized according to my analytical scheme as both musicianship and musical ideal (see definitions below in Section 7.3), because the teacher referred both to the composition and to how the student should start working on it. The color in the analytical tables identifies the object of the activity. The intensity ratings in these episodes were 95% by the teacher, and 50% and 60% by the student. Even though these numbers illustrate the significance of these episodes to the parties, the ratings covered a timescale which was longer than one episode. From the perspective of Intensity of Interaction, sense making in this study often covered more than one episode of meaning construction. I will discuss the intensity ratings in connection with the musical and pedagogical meaning construction in the following chapters. However, at this stage the analysis focuses further on the communicative actions by the teacher and student. Hence, the next section deals with the categories and process of Voice Analysis.

7.2 Social languages

For the analysis of the lesson interaction, I have applied the Method of Voices (Engeström R. 1999b). In Chapter 4, I identified social languages, which the teachers and students use in their interactive musical problem solving. As explained earlier, by social languages I mean socially articulated and culturally shared interpretations of meanings. These meanings are “objectified by the choice of topics, words, and by various linguistic and discursive forms and practices of communication” (R.Engeström 1999b, 167; see Chapter 4). Social languages are evoked by the voices. By definition, the voices are the speaker’s actions, which produce new statements on the grounds of earlier statements of a speaker. The speaker’s new statement in its turn receives and handles not only the repeated meanings of the situation, but also unexpected and new kinds of elements of the interaction. Therefore, the interaction contains and also discloses the potentially emerging meanings in a statement.

In the analysis of the instrumental music lesson interaction, I produced the matrix of social languages with two dimensions, which expressed the constructed realities of music making in pedagogical interaction. Consequently, the lesson interaction carried traces from several distinguishable cultural and historical traditions. As one dimension, I described the

object of activity or the speech and action content, which I named musical ideal, musicianship, and musical re-contextualisation. As the other dimension, I described the established mode of communication or the generalized aspects of speech and interaction. These expected manners of lesson interaction were explanation, control, and narrative (see Chapter 4).

After I found and named the ideal outline of the dimensions by historical analysis of the musical and pedagogical meaning construction as well as examination of the collected lesson recordings, I organized the data in a chart of social languages (see Appendix 4). This chart was a hypothesis in itself, which I tested via data-based analysis and by coding the episodes in the chart. The chart seemed to work in the sense that I was able to fill in the empirical analyses of the musical and pedagogical meaning construction for all episodes. Many of the episodes, however, contained mixed meanings and modes, and some episodes also had material for new kinds of social languages. These findings at the edges of the analysis set up and pointed out the borders of the chart. As R. Engeström (1999b) shows in her study, the developed social languages at the edge of the chart refer to cultural change and therefore to the possibilities at the zone of proximal development of lesson activity.

The named social languages illustrate the meanings by which the teacher and student collaboratively constructed their musical and pedagogical problem solving, engendering interactive meanings. Consequently, their meaning construction and sense making was the focus for understanding the phenomenon of Intensity of Interaction.

Social languages in musical and pedagogical context

The modes of communication as related to the objects of the lesson activity construct the social languages in the lesson descriptions of the present study. In her study on medical problem solving in doctor-patient interactions, R. Engeström (1999a, 1999b, see also Chapter 4) named the voices of the speaker according to social languages of everyday, medical and bureaucratic languages of somatic, psychological and social objects. When transferring her method to musical and pedagogical problem solving, this study has specified the voices in communities of musical instruction and learning as explanation, control and narrative of musical ideal, musicianship and musical re-contextualization objects (Table 7.2). The analysis of empirical data, however, expanded the nine expected social languages into twelve as follows.

Social Languages in Instrumental Music Lessons		
1.	explanation	of musical ideal
2.	explanation	of musicianship
3.	explanation	of musical + musicianship
4.	explanation	of musical re-contextualization
5.	control	of musical ideal
6.	control	of musicianship
7.	control	of musical + musicianship
8.	control	of musical re-contextualization
9.	narrative	of musical ideal
10.	narrative	of musicianship
11.	narrative	of musical + musicianship
12.	narrative	of musical re-contextualization

Table 7.2: Social languages of instrumental lesson dialogue

The Method of Voices (Engeström, R. 1999a, 1999b) does not imply that every voice should be fixed with a given language. Languages, as historically produced rationalities, are themselves seen as developing processes that offer communicative resources used (or not used) by the student and teacher. Every local voice by a speaker is anchored in three situational contexts of problem solving: (1) the problem (musical, technical, physical, psychological, social) experienced or identified by the student and/or by the teacher, becomes transformed into a problem (chief complaint) to be worked on at the lesson, (2) the problem becomes defined (naming the problem), usually by categorizing it a particular way, and (3) the problem turns into the solution (proposed actions).

Through voices, the social language becomes situational and pedagogically intentional, and therefore justifiable for the purpose in its context. This study aims to understand how each social language relates to others. However, the point here is not to judge or evaluate the logic or soundness of the social languages. This study underlines that the linear and logical explanation, the verbal and non-verbal control, and the imaginary storytelling, are locally constructed interpretations in and of each situation. Moreover, the aesthetic qualities, musical values of a composition and the process of interpreting and expressing musical, practicing and playing music within a given or a new context, are different approaches supporting each other

in musical learning. Therefore, musical teaching and learning expressed by social languages includes musical and pedagogical targets and proximal goals based on teaching and learning strategies.

To understand and examine the interaction in an instrumental lesson, it was necessary to make distinctions in the meaning construction. The social languages do not, however, stand for dualistic extremes or contradictions by themselves. Rather, the invoked social languages expressed musical and pedagogical meanings, which came quite close to each other. The articulation of the voices was helpful for grasping the structural details of the musical and pedagogical, verbal and nonverbal expressions. The distinctive and also somewhat similar characteristics of the social languages gave grounds to the interpretations. The definitions and examples in the following section introduce the key features of the analytical process.

7.3 Objects of the lesson activity

As discussed in Chapter 4, recent writings within music education philosophy, for example, in the US and Finland have discussed and also bridged the expressed differences between the so called praxial and aesthetic music education tradition (e.g. Elliott 1995; Westerlund 2002; Väkevä 2004). However, in this study, objects such as the practical musicianship and music as a work of art are not seen as dualistic extremes. Quite to the contrary, they seem to intertwine and support each other with variations in the musical and pedagogical interaction. Each of the recorded lessons was a musical and pedagogical whole, in which teachers' and students' intentions were negotiated and clarified. The teachers and students formulated their joint interest or focus of the lessons through their personal perspectives, which were their historically constructed conceptions of the lesson. Therefore, the musical and pedagogical emphasis and intentions of each episode directed the analysis. In other words, this study viewed the lessons through the relationships between the distinctive *objects*. The named objects defined the instrumental lesson activity. In other words, the objects in their turn contained the collaborative musical and pedagogical intentions, which determined the course of each episode.

As an illustration, the named objects also have relevance when we go to a concert. Our decision to go to a concert may be based on who and what kind of performers the artists are (musicianship), what music is going to be performed (musical ideal), from where and from

what social situation the music originates, and where and in what context it is performed (musical re-contextualization). Focusing on any one of these elements of musical performance alone may be enough for one to make the decision to go to a concert. Of course, the combination of elements with other personal and social reasons makes one's decision even stronger.

In the analysis, I applied the three objects presented in Chapter 4. In analyzing the distinctive objects of the lessons – musicianship, musical ideal, and musical re-contextualization – I soon found it necessary to add a combination of objects, musicianship+musical, because 30% (475) of all episodes turned out to have intertwined meanings in the musical and pedagogical problem solving.

Musicianship (mship)
Focusing on the player, musician, and his or her competence, ability to play, sing or perform music by constructing statements, actions, and or other means of instruction
Musical problem solving with and through the instrument, the player or his or her body
Concerning personal and musical growth of the person
Musical ideal (mcal)
Constructing statements, actions, and or other means of instruction concerning the music, composition, or rhythmic, harmonic, or melodic patterns
Musical problem solving based on the written music, ideas of the composer, aesthetical and musical values represented by the composition
Musicianship and musical (mship+mcal)
Combining the objects, which are intertwined in musical and pedagogical meaning construction
Musical problem solving includes both the musician and the musical composition during one episode
Musical re-contextualization (mrc)
Musical and pedagogical problem solving in re-contextualizing the original composition with related musicianship
Constructing elements for alternate expressions through the instrument and with using the elements of a composition
Reflecting on changes of styles, genres, or cultural setting
Reflecting on the purpose of a musical or pedagogical improvisation

Table 7.3: Objects of an instrumental lesson

Musicianship consisted of the personal ability, involvement and communication with music of the participants. Custodero (2002b) states that musical engagement emanates from and resonates with the multiple representations of musical challenge. The challenge, in the lessons, was a multifaceted musical and pedagogical problem-solving process that developed the musical and technical competence of both the student and teacher. Both opened their musicianship, and their musical and technical experience for observation, analysis, and adjustments. Both were learning about themselves as musicians. Musicianship was a common object, even though the teachers represented the musical, instrumental and pedagogical tradition, which they passed on to the students. Obviously, the students' musical competence and ability to absorb guided the interactive process by which musicianship developed.

Musical ideal,²⁹ as an object, focused on the ideas of the composer or the composition. Each composition represents aesthetic values and qualities that originate from the musical tradition. The music culture, genre and historical background were present in the music. The musical ideas captured in the symbolic signs and which directed their expression and which the participants read and heard through the score.

Musicianship+musical object represented a combination of focus on developing personal musical abilities and the details or the character of, for example, the score.

Musical re-contextualization as an object expanded the musical and pedagogical elements of the music played or learned, personal musicianship, and the context. *Musical re-contextualization* in the three lessons (L17, L18, L22) were in episodes that had a particular purpose. These episodes offered motivation for musical performance and opened up new possibilities through improvisation and immersing into an imaginative context.

7.4 Distinction of the Objects

In the following section I will present examples for the distinction between the objects in the lessons of this study. In analytical Table 7.4, the singers exercised sound production. The teacher supported the student in her attempt to make less use of her lower jaw. By pointing to the forehead the teacher showed where the feeling of sound production should be.³⁰

²⁹ Later I will use only "musical" for the musical ideal as an object of a lesson.

³⁰ Sections 6.3 and 8.2.6 provide more contextual details for lesson L16.

Epis	Dur	Teacher	T	St	Student
17/ 54	34	Hyvä, ja maltat olla tekemättä alaleualla töitä [Good, and have patience not to work with your jaw.]	crl/ prf, har, tch, body, body/ mship	ctrl/ prf, har, tch, body prf, snd/ mship	sssyi jyi..
		Niin se auttaa heti.(piano) [Yes, it helps at once.]			ää mm
		Noin just (piano) täällä hätsii (näyttää otsan seutua) [Just like that (plays the piano) here hätsii (shows the forehead).]			sssyi jyi..
					sssyi jyi..

Table 7.4: Sound production exercises in vocal lesson L16

I interpreted the playing or singing in the episodes as control of musicianship, since the orientation was clearly technical and physical without reference or connection to the composed score or music. The episode 17/54 had no reference to written or composed music; therefore the object in both voices was musicianship.

The object of episode 43/60 (Table 7.5) in the flute lesson was clearly musical, because their work directly focused on the written musical score. The teacher and students were preparing to play the orchestra parts of the *Prélude à l'après-midi d'un faune* by *Claude Debussy*. First they looked for the music in different editions, and then the students agreed on who would play and from which music. Finally, the male student asked about the tempo. The teacher replied, “it is rather slow”, and sang a little bit of the phrase. “It flows.”

Epis	Dur	Teacher	T	St	Student	Student
43/ 60	72	Ok, Faunia (katsoo J:ta) - - missäs se on (selaa nuottia) - - siinä [Ok let's play the Faun (looks at the student) where is it (going through the score) there.]	xpl/ prf, ima, rtp/ mcal	xpl/ prf, ima, rtp/ mcal	En mä tiedä mä oon soittanu sitä vaan [I don't know I just played it.]	Aakkosjärjestyksessä [Alphabetically]
		Se on paljon harvemmin kirjoitettu tää tietysti siin on molemmat rivit. [It is written in a wider format, it has both lines.]			On jotenkin pientä (...) Täytyy ottaa oma nuotti - - no soitetaan sit tästä. [It is kind of small. Have to take my own music, let's take it from here.]	Heh heh eks toi oo paljon epäselvempi - saat sä soittaa
		Sehän on aika hidas - - laulaa -- et se valuu. [It is rather slow (sings) it flows.]			En mä sitä mut minkä lainen tempo täs on? [Not that, what kind of tempo is it here?]	[Heh, isn't it much more unclear. You may play.]

Table 7.5: Debussy in flute lesson L17

The object was musical also when they discussed the contents or elements of a pattern or a scale. In the group of young cellists, they were not ready yet to play a full scale. Instead, the cello teacher focused (Table 7.6) on the actual names of some notes in the group lesson. While she played the notes, she asked: “do you remember this note?” The boys started their

guesses (episode 14/49). This led them to recognize the ‘Sun song’, which they also sang and played.

Epis	Dur	Teacher		T	St	Students (5)
14/49	30	Muistattekste minkä niminen ääni tää on? [Do you remember what is the name of this note?]				
		(plays)	soittaa a-kielen			A, D
		Ei oo, [no it is not]	[Plays A-string]			A, aaaa!
		(plays)	soittaa uudestaan			D!
		Se on aaaa! [It is A.]	[Plays again.]			C! H [B]
		Kukas muistaa mikä ääni on? [Who remembers what note is this?]				D
		Ei o! [No!]	soittaa a-kieleltä h:n. [Plays B on A-string.]	xpl/ har/ mcal	xpl/ har/ mcal	H [B]
		H, tää on H, nyt silmät kiinni. Kumman äänen mä soitan, a:n vai h:n? [B, it is B, now shut your eyes. Which of the two notes do I play A or B]				
Silmät kiinni. No, kummas mä nyt soitan, mä sekotan niitä vähän. [Keep your eyes shut. Which one? I mix them up a little.]	soittaa a:n [Plays an A.]			A, aaaa!		
Silmät kii! [Eyes shut!] [Plays several notes on A string.]	soittaa epämääräisesti a-kieleltä useita ääniä odottaa ihan hiljaa paikallaan			H		
15	35	[Waits quietly.]				E!
		<i>Silmät kii</i> [Eyes shut!]				Onko se e? [Is it e?]
			soittaa a:n [Plays an A.]			
		H, se oli h, ja nyt kuunnelkaas mikä laulu tulee kun mä soitan a:ta ja h:ta? [B, it was B, and now listen what song does it turn out to be when I play A and B?]	alkaa soittaa, ja soittaa loppuun. [Begins to play, and plays to the end.]			E ja G! [E and G.]
		Lauletaas kerran mukana tää [Lets sing along.]		ctrl/ har, tch/ mcal	ctrl/ har, tch, ima/ mcal	A! H! Aurinko (the sun!)
						mä sanoin Ei loista! [I said it didn't shine.]
						se oli pilvessä ja satoi [It was behind a cloud and it was raining.]
				(Kaikki kuuntelevat hiljaa silmät kii) [(Everybody listens quietly, eyes shut).]		
				(kaikki laulavat) [(All are singing).]		
16	26	a ja h, hienosti! [A and B, good!]	tulee Aamoksen luo (Comes to Aamos.)			
		se oli pilvessä [It was behind a cloud (alkaa soittaa samalla,.) (Starts to play at the same time).]		xpl/ ima/ mcal	xpl/ ima/ mcal	(vanhemmat toppuuttelevat) [(The parents try to quiet down the children).]

Table 7.6: Sun song in violoncello group lesson L19

They focused on cognitive information, names of notes and their places on the cello. As an effect, in the episode 15/49, the focus started to move away from names of the notes: one

of the boys started his own story on the ‘Sun song’ – “the star did not shine, because it was behind the cloud”. By joining the story (episode 16), the teacher was able keep the joint focus on the musical object.

Table 7.7 illustrates that the social language, control of musicianship + musical, musical production by playing or singing, contained a complex combination of both objects. While examining the markings on the music, they focused on the sound production.

Epis	Dur	Teacher			Student
15/29	116(sec)	Vaikka tää on pianoksi merkitty tää neljäsasema, anna sen soida vähän kiinteämmin eli jonkinlainen, vaik on piano, soinnissa on joku ydin olemassa koko ajan kuitenkin. [Although the marking here in the fourth is piano, let this position have solid and core sound all the time.] Ihan rauhaa [Peacefully]	ctrl/ dyn, tch, snd, rtp/ mship+ mcal	ctrl/ dyn, tch, snd, rtp/ mship+ mcal	
					Soittaa [Plays]

Table 7.7: Telemann in violin lesson L4

The violin teacher controlled the student’s expression on the slow movement in the Telemann sonata. “The sound should have a core, when you play in the fourth position, even if there is a piano marking in the music.” The student played presumably with this orientation in mind and the teacher conducted while the student played by saying “have peace” (with your sixteenth notes).

The object of musical re-contextualization (mrc) appeared rarely in the lessons of this study; three episodes in three different lessons had this kind of object. Two of them were in the cello group lessons. One appeared when the boys were preparing for the spring concert (Table 7.8) and the teacher described where, what and how they would be performing the two songs.

Epis	Dur	Teacher	Teacher	Students (6)	
16/40	20	tämä ja pikku pupu me soitetaan Temppeleaukion kossa, jokainen tiestä pääsee soittamaan semmoseen tosi hiinon kirkkoon, siellä me soitetaan pikku pupu ja Tuikkari [We will play this Little Rabbit in the Temppeleaukio church. Everyone of you gets the chance to play in this big and beautiful church, There we wil play the Little Rabbit and the Twinkle...]	xpl/ prf, ima/ mrc	xpl/ prf, ima/ mrc	

Table 7.8: Anticipation of the coming concert in cello group lesson L22

Lesson L22 started by the symbolic play with the Matryoshka dolls and playing the familiar repertoire. The announcement of the coming spring concert culminated the warm up

period. This episode (16/40) served as an introduction for a new context, in which they were going to perform. This introduction opened the anticipation of the coming concert with its emotionally charging process, feeling of celebration, cloths and costumes, parents and friends in the audience.

The other cello group lesson with an episode of musical re-contextualization was at the beginning of the same spring.

Epis	Dur	Teacher	T	St	Students (6)
36/39	43	Ja sitten me katsotaan, me avataan se Linnan raunioin se jotain [And then we will see, we'll open the Old Castle.]	nar/ snd, ima, dyn/ mcal	nar/ snd, ima, dyn/ mcal	Mua jännittää [I feel excited.]
		Ottekste valmiina kummitusääniin? [Are you ready for the ghost sounds?]			Mua ei jännitä yhtään [I am not excited.]
		Ei vielä, ei paljasteta vielä kummitus juttuja, ei yhtään vielä, ihan hiljasta, tulee yö. [Not yet, let's not recover the ghost stories not yet, it was all silent, the night comes, ...]			(someone is about to start playing)
		Tsyth,			
		Hyvä, nyt meil on tarina valmiina: [Good, now we have the story ready:]			
37	73	<i>On myrsky ja on pimeää, paistaa taivaalta kuu, mustat jotku on jossain, ja mitä ääniä sieltä kuulu. Lähetään ottamaan selvää... [It was stormy and dark, the moon was in the sky, black shades, and what sounds do we hear. Let's go and find out...]</i> [(Speaks with mystical voice)	nar/ ima, ens, dyn/ mrc	nar/ ima, ens, dyn/ mrc	begins playing.]
					(alkavat tehdä efektejä) [they start to produce effects]
		mustalle puulle vaan koputetaan, [knocking only on the finger board]			(innostuu "sahaamaan" selloa, takana oleva isä topputtelee, ja hän rauhoittuu)
		mustalle puulle vaan [only on the fingerboard]			[(Knocking with the bow on the finger board.)]
		musta puu vaan [only on the fingerboard]			
ja sitten hiljenee, hiljenee (diminuendo and shows quiet down)					[(The effects quiet down.)]
		mennään pois [Lets go away.]			

Table 7.9: Old castle in cello group lesson L18

The teacher introduced the song by a narrative, a story about an old castle. One of the students commented that he was excited. The other boy said he was not at all thrilled. The episode 36/39 (Table 7.9) was therefore coded as narrative of musical ideal. In the next episode, they entered into a new context improvising with different kinds of effects on the cellos while the teacher was playing the song of the Old Castle. The outcome of this sound cluster was a surprisingly genuine haunted-house experience.

The third lesson with an episode musical re-contextualization was in the flute lesson. The two students had been warming up and were playing the fourth symphony by Brahms. In episode 18/60 (Table 7.10) the teacher asked the male student if he was unsatisfied with his playing and urged him to play again. Then she widened the context for the female student: “This was beautiful and wonderful, but now you are in a big concert hall and blow it out with full effort in a big symphony orchestra.” She encouraged her not to worry about the clean sound so much.

Epis	Dur	Teacher	T	St	Student	Student
18/60	99	Ooksä tyytymätön johonkin -- soita uudestaan jos sä oot joo hei, ooksä johonkin tyytymätön -- tätä on kaunista ja ihanaa mut nyt soitatte suuressa salissa ja vedätte täysillä tää on ison orkesterin keskellä [Are unsatisfied, this is beautiful and wonderful, but now you are playing in a big hall in the middle of a big orchestra.] Ei oo väliä vaikei tuu kauhean siistä [It doesn't matter it is not so clean now.]	nar/ prf, dyn/ mrc	nar/ prf, dyn/ mrc	No en nyt [Not really.]	
		Joo ja N ihan mistä vain voit lähteä [Yes, and you can start anywhere you like.]			Soittaa (pyörittelee huilua) [Plays, rotating the flute.]	Soittaa [Plays]

Table 7.10: Brahms in flute lesson, L17

In the interpretation, the narrative mode of communication dominated the episode 18/60. Even though the students did not verbally add to nor continue the narrative, they responded via musical expression, enabling the narrative to proceed.

7.5 Modes of communicative activity

For the second dialogical source of social languages, this study suggested musical and pedagogical *modes of communicative activity*, which followed the logics of explanation, control and narrative. Generally, explanation is linear, cognitive and common sense problem solving; control is the “coherent power that informs and influences the inside” (e.g. Gothóni 1998, 156; my translation) and guides the other person; narrative is “an emotional identification process where reality and imagination face each other” (Hakkarainen 2002a, 75; my translation), and in which “the learners are at the same time inside the object and on the outside, acting and reflecting”.

Chapter 4 discussed the origin of the modes of communicative activity. Each mode of communicative *activity* carries connotations from many different situations and contexts.

These everyday, musical, or other origins of the modes of communicative activity tend to influence our thinking. Therefore, my attempt to use explanation, control, or narrative as means of mediation of the musical and pedagogical meaning construction in lesson contexts, faced the challenge of rethinking or widening the connotation and practical meaning of each mode of communicative activity. Table 7.11 collects definitions of the modes of communicative activity based on empirical interpretations from the analysis.

Explanation (exp)
General remarks, adjustments, assessments on playing, the music, organizing, or other matters in a lesson
Reasoning by linear thinking, or practical logic, which is focused on technical or musical issues. It uses examples, and follows a linear time conception
Neutral statements (e.g.
Meta-talk (e.g.
Pondering, listening, considering, nonverbal expression of understanding.
Prompting, suggesting, focusing on next topic, or introducing the next assignment.
Control (ctrl)
Specified urging, advising, directing on instrumental technique, musical phrasing, practicing, or on other matters in musical problem solving.
Singing, conducting, offering verbal directions to provide guidance
Direct and intentional influence on one's own or other person's musical expression, playing technique, musical or other behaviour.
Prompting to use senses: look at, hear, and feel. Mastering by audio-visual and kinaesthetic means
Narrative (nar)
Personal and emotional viewpoint, storytelling and imaginative thinking or acting.
Allowing the story or imaginative image to lead the musical expression.
Creative improvisation through discussion or musical expression.
Expressing the written music with imaginative variations.

Table 7.11: Modes of communicative activity

In the empirical data, explanation appeared to be a quite clear and straightforward reasoning process, a kind of expression of the thoughts, when the statement contained facts or

logical arguments. The use of language in art or more precisely music pedagogy is also often colourful, imaginative and personal. Therefore the connotation of explanation came close to narrative in many episodes.

When the response was not talking, playing or singing but nonverbal reactions like writing down, nodding, smiling, or other mimicry (facial expressions), the interactive nature of the episodes widened the meaning of explanations. I coded these reactions as explanation, because, according to the comments of the participants and my interpretation, the nonverbal signs continued the verbal reasoning in their thoughts. Likewise, listening and mute response as nonverbal reactions of the other person were signs of consideration, rethinking, agreement, or of receiving the message. The process of considering an alternative or new idea had started and continued in the student's mind. In my experience, our mind takes its time for maturing ideas. If verbal statements tend to tie up our thinking, it would sometimes be better not to force them out too soon. The often so communicative vocal student (lesson L16) commented on her silence in certain episodes:

St: I don't really talk at all. I only 'mm, mm.', but I do still receive it all and then think what it means in my case. When you said how beautiful the song is, and what things we can find in it, I was just feeling along with you. I didn't have to comment any more about it. (Stimulated recall 25.1.07)

Actually, the teachers often prompted the muted or nonverbal response by use of characteristic verbs: "listen", "look at", "feel it", "taste", or "think about it". These auditory, visual and kinaesthetic ways of reacting did not necessarily presume or encourage immediate verbal response.

The response to explanation was, however, control in many episodes. I coded as this mode of communicative activity for episodes with musical expressions by playing or singing. Control may have a strong connotation of authority. The meaning could stand for ruling, forcing, or using power over somebody or something, or dominating behaviour. In musical and pedagogical contexts control was, however, more close to mastering, having a good command of the musical expression and technical performance. Moreover, the sense of control was one key element of the flow experience. Custodero (2002a, b) described the optimal experience in music making as a creative activity. It exemplifies the feeling of agency and facilitates a sense of potential control, and an understanding that one's actions are of importance. In many of the

lessons, for example, in the flute lesson (L17), freedom in generating possibilities was at the core of the creative impulse and artistic response. The flutists explored the possibilities of pitch and rhythm in context by, for example, embellishing melodies and abbreviating a note's duration for personally expressive purposes.

The narrative mode of communicative activity carries different connotations as well. In instrumental music lesson contexts, narrative had the tendency to emphasize the agency of the teacher and student. Narrative was not just telling a story or using imaginative language. The person was part of the story, or “my life” was the story in the musical expression (vocal lesson, L16). Therefore, narrative in the lessons concerned not only explanations about emotions, feelings, or images but also experiencing them personally.

7.6 Distinctions of the modes of communicative activity

The following examples specify how the analysis distinguished between different modes of communication.

Explanation

In Table 7.12, the teacher strongly expressed the standards of intonation in the classical violin tradition and how to practice along with such aesthetic quality.

Epis	Dur	Teacher	Teach	IR%T	IR%St	Stud	Student
44/46	15	(Ottaa jousen pois) rauhallisesti [(Takes the bow away) easy now.]	xpl/ har, int, prf/ mship+ mcal	75	70	xpl/ har, int, prf/ mship+ mcal	Oikeat äännet [The right notes]
		Ei oo puhtaat on puhtaat tai ei oo puhtaat melkein puhtaat ei mukana, kato kun sä haaskaat aikaa jos sä harjoittelet melkein puhtaita ääniä [Not in tune, almost in tune does not count. See, you will waste time, if you practice notes almost in tune.]					Melkein [Almost (in tune)]

Table 7.12: Standards of intonation in violin lesson L11

The student stated in his “surviving strategy” that he had “the right notes, almost,” which provoked the teacher’s reaction: “(...) you waste time, if you practice notes that are almost clean”. They both were explaining. However, the teacher’s purpose was to create control of intonation and the student’s strategy was to avoid the teacher’s control at this time. The object was musicianship + musical, because the teacher and the student referred both to the technical and musical competence along with the aesthetic principles, which the classical composition,

a *concerto by Bériot*, evoked and traditionally stands for. The markings of the pedagogical targets represent a view of the harmony-based intonation (har) of a musical work in the romantic period.³¹ Performance (prf) refers to the student's ability to carry out the expected task, which in this episode was to produce accurate intonation on the violin.

The discussion in episode 9/28 (Table 7.5) was about how the dynamic expression takes effect in the sautillé bow technique. Then the topic turned to control of the tempo and performance by preparing the upbeat by sneezing, breathing through the nose.

Epis	Dur	Teacher	T	IR%T	IR%St	St	Student
9/28	32	Tää on hyvä paikka keskeyttää. Oikein hyvä. kerro mulle itte, että mitä sun jousen käytössä tapahtuu kun sä teet crescendoa, -- se muuttuu minkälaiseksi? -- ja sitte kun sä teet diminuendoa niin se muuttuu enemmän hyppiväksi [This is a good place to interrupt. Very good, would you tell me what happens in your bow when you make cresc.? – it changes in what way? – and when you make dim. It bounces more.]	xpl/ tch, dyn/ mship	95	95	xpl/ tch, dyn/ mship	No se ei oo niin hyppivää semmoseksi tasaiseks. [Yes it is not so bouncing kind of even...]
10	40	Mulla on semmonen tunne et sä voisit soittaa tätä vähän nopeammin, se on aavistuksen verran jähmeä, siipiä selkään enemmän, ja nuuhkase se koho (näyttää) vähän hilpeämpi. [I feel that you should play this a little faster, it is somewhat sticky, more winds on the back, sneeze the upbeat (shows) a little more joyous.]	ctrl/ rtp, ima, prf/ mship			ctrl/ rtp, ima, prf/ mship	
							Soittaa [Plays]

Table 7.13: Bow technique in violin lesson L2

In episode 10/28, the teacher controlled by showing with the violin how to start, and the student tried it by playing. The object here was musicianship, because they concentrated on the ability of producing the technique without a direct reference to the composition.

Explanation and control seemed to intertwine somewhat in the data of every lesson of the data. Therefore, the distinction between the two modes of communicative activity in the instrumental lesson was based on the emphasis and tendency of the speakers. The teachers' and students' first and direct intention in an episode guided the interpretation. It was sometimes difficult to distinguish between a neutral explanation and a subtle attempt to control. The teachers and students caused control intentionally or unintentionally in musical expression by presenting and offering knowledge of the music, or the tradition, or the technique. The mode of communicative activity was after all still explanation in episodes

³¹ A set of special abbreviations was devised for this purpose: The markings 'har' indicate harmony, 'int' is intonation, and 'prf' is performance (see Appendix 7).

despite their effect of control. For example, in the examples above, the teacher controlled the intonation and the student's practicing habits (Table 7.12) and how to use the bow technique (Table 7.13), merely by stating facts. Because the matters they brought up were indirectly controlling, the mode of communicative activity was interpreted as explanation in the analysis.

Control

Similarly, control sounded like explanation when the parties stated facts about music, playing technique, or other musical matters.

Epis	Dur	Teacher	T	IR%T	IR%St	St	Student		
3/48	72		ctrl/ tch, rtp/ mship			ctrl/ tch, rtp/ mship	Soittaa [plays]		
		Älä irrota siinä [Don't let go.]					soittaa		
		Ota rauhassa se menee hiukan liian nopeasti (naputtaa jalalla koko ajan) [Take your time, it is a little too fast [taps her foot all the time].]					soittaa		
		(soittaa) [(Plays)] se menee liian nopeasti [Too fast!]					soittaa		
		Kato, tää ykkössormi [Look, first finger]					soittaa		
		Soittaa (Plays)					soittaa		
		sulta puuttuu hei yks sävel siitä [One note is missing.]					78	75	soittaa
									soittaa

Table 7.14: Left hand technique in violin lesson L11

As shown in Table 7.14, the violinists worked on left hand technique (tch). The student was playing all the time and the teacher stated that the student should not let go of his grip and take it easy: “the tempo (rtp) is too fast, (...) look at the first finger, (...) you lost one note from it”. Because these comments were directly focused or meant to develop the quality of expression, or the way of musical thinking and playing, the mode of communicative activity was control. The instructions were combined or reinforced with conducting, singing or playing along or together as well. For example, in Table 7.14 the teacher was tapping his foot and played along in order to slow down the tempo of the student's playing.

Consequently, control consisted of modeling by gesture, dancing, singing, and playing along (see also, Hanken 2008). By playing, singing, tapping or clapping, the students and the teachers controlled their own, each others' and the joint music making. Musical expression and instrument-specific technique were often the main targets or proximal goals in their meaning construction during these episodes.

Narrative

Narrative was similar to explanation, when the person used images, comparisons, or symbolic expressions from, for example, everyday life or nature. In the vocal lesson (Table 7.15), the teacher used descriptive language for emphasising the mysterious energy in the song. She suggested that the student should sing quietly, as if it was a big secret: “the secret is so big you cannot shout it out.”

Epis	Dur	Teacher	T	IR%T	IR%St	St	Student
35/54	28	Nii, mut jos aattelis et se on, suuri salaisuus (kuiskaten)	nar / dyn, snd, prf/ mcal+mship	90	80	xpl/ dyn, snd, prf/ mcal+mship	
		[Yes, but if it were a big secret (whispering.) Semmonen niinku että tätä ei voikaan huutaa kun tää on niin iso juttu.					mm
		[So big that you would not shout it out:]					niin
		hiljainen .. Pitää olla hiljaa ja kuunnella niinku salaa, että kuulee kaiken					
		[Silent...in order to hear you have be quiet and listen, like secretly.]					mm
		et silleen, ettei (antaa kehon lysähtää) silleen voi jos...					(naurahtaa) [Laughing]
		[That is the way (lets the body collapse) if...]					

Table 7.15: The “big secret” in vocal lesson L16

The teacher’s social language in this case was a narrative of musical + musicianship. The student did not, however, join in developing the image of a big secret. If she had, I would have interpreted her mode of communicative activity as narrative in the analysis. The power of the teacher’s dynamic paradox was not used to its full extent in their interaction, since the musical expression was left at an introductory level.

Generally in the analysed lessons, when images, stories, and descriptions dominated the expression or the playing or singing situation, and both the teacher and the student yielded themselves to the act, I interpreted the episode as narrative. Similarly the episode was

deemed narrative when personal stories, experiences or opinions directly guided the musical process.

Epis	Dur	Teacher	T	IR% T	IR% St	St	Student
14/25	61	Sautille jousi vie sinua, hassua. Mainiota miten se vie sun jousikäden mennessään, se on vähän sama juttu, kun tempo vie sut mukanaan: se ihmejousi on kuin noidan oppipoika, kun se vie sen mukanaan. Sautille spiccato, jota sä yrität pysäyttää: pysähdy pysähdy mutta se ei sittenkään pysähdy. Ni siin oli vähän semmonen olo - - . Kuule tehdään kokeiluja senhän on hyvä asia se ei oo huono asia, että se on näin päin. [The Sautillé bow is pulling you. Funny how the bow takes your hand along. It is almost the same as when the tempo takes hold of you: the wonder bow is like "Apprenticeship of the Sorcerer". It was like trying to stop the sautillé spiccato, stop, stop, but it didn't stop—listen let's do some experiments, thus the bow is good this way...]	nar/ rtp, ima, body, tech, ens/ mship	90	70	xpl/ mship	Siltä se vähän tuntuukin [It also feels a little bit like that]

Table 7.16: Sautillé bow in violin lesson L3

In the violin lesson L3 (Table 7.16), the teacher associates the picture of how a sorcerer takes hold of the apprentice and leads him powerfully with how the student's sautillé bow took over the ongoing movement. The story dominated this episode, therefore the teacher's speech was interpreted as truly narrative. However, the student's mode of communication remained explanation, because she did not add anything to the narrative, even though she agreed: "it feels a little bit like that".

Epis	Dur	Teacher	T	IR%T	IR%Ob	St	Student
2/12	19	Aha. Kokeile säkin. [You try it also.]	nar/ tch, body/ mship	80	95	nar/ tch, body/ mship	(Laittaa tahallaan huonon viuluasennon) Sit sä voit korjata mua.
		Joo. Leiki. Laita huono asento. Okei. Sit mä vaan hipasen sua. [Yes, it is a game. First a bad gesture. Ok, then I will touch you.]					[[Bad position in purpose.] Now you can correct me.]
		Nyt sä korjaat kaikki oikein. [Now correct the position.]					(Korjaa) [Makes the corrections.]

Table 7.17: Role play in violin lesson L13

Instead, I coded both social languages in the example in Table 7.17 as narrative, because the role-play, through which the boy violinist corrected the teacher's gesture, dominated the episode. Narrative was the leading mode of communicative activity for both the teacher and the student, because the boy really went along with the role play:

Now you can correct me.

The teacher continued:

Yes, it is a game. Play in a bad position. Alright, now I just touch you lightly.

The example in Table 7.18 from the same lesson is also narrative, because of the association with the bow stroke and driving a car. “The driver has to steer the car...” Steering the bow started to make sense, because both the teacher and the six year old boy took turns in developing the story.

Epis	Dur	Teacher	T	IR%T	IR%Ob	St	Student
7/12	23		nar/ ima tch/ ms		90	nar/ ima tch/ ms	A: Joskus käy niin, et tää menee ihan näin (näyttää jouta otelaudan päällä)
		S: Niin se voi mennä silleen ihan, se voi mennä ihan pieleen. [Yes, it can go like that, it can go wrong way.]					[Sometimes it goes like this (shows the bow on the fingerboard).]
							A: Liikaa hartsia.
		S: Niin. Mut täytyy tota vähän enemmän ohjata autoa. Autoiljankin täytyy ohjata, muuten menee kyllä aitaapäin. Mitä käy jos menee aitaapäin?		75			[Too much rosin.]
		autolla? [Yes, but you must steer the car. The driver has to steer otherwise it will go against the fence.]					
		[What happens if the car crashes against a fence?]					A: No, auto pysähtyy.
		S: Niin voi käydä onnettomuus. [Yes, an accident may occur.]					[The car stops.]
			A: Niin voi lentää vaikka mereen. [You could fly to the sea.]				
		S: Esimerkiks. Kokeillaan, et ei niin käy. Nyt mä taas lasken kolmeen. [For example, let's try so that it won't happen. I will count to three.]		65			(Intoutuu leikkimään jousella autoa.) [Starts to play with the bow pretending the bow is a car.]

Table 7.18: Steering the bow in violin lesson L13

They developed the narrative reasoning, which led to practical implications in controlling the bow stroke. The student started by pondering how the bow can slip on the fingerboard. “It needs steering. Like, when we drive the car, otherwise it hits the fence”, the teacher added. “What happens, if the car hits the fence?” “It stops; it can fly into the sea.” “Let’s try so that it won’t happen”. The boy extended the narrative by his comments and he also expanded the narrative by playing with his bow creating variations of his own. The intensity ratings by the

teacher went down a little. She thought, according to the stimulated recall interview, that they were moving somewhat on a sidetrack as far as the violin technique was in concerned.

7.7 Frequency of social languages

The relative numbers of social languages offer an overall picture of the character of the interaction: the way the teachers and students expressed themselves in the lessons was practical and they focused on musicianship in most of the episodes. Table 7.19 shows that the lesson descriptions by numbers supported the expected profile and script: they used mostly languages of control. The number of control was 901, which is 56% of all modes of communicative activity and more than explanation (616) and narrative (72) together combined.

xpl/ mship		xpl/ ms+ mc		xpl/ mcal		xpl/ mrc		All	%
t	st	t	st	t	st	t	st		
189	146	87	63	71	58	1	1	616	39 %
ctrl/ mship		ctrl/ ms+ mc		ctrl/ mcal				901	56 %
t	st	t	st	t	st				
268	298	132	172	12	19				
nar/ mship		nar/ ms+ mc		nar/ mcal		nar/ mrc		72	4,50 %
t	st	t	st	t	st	t	st		
17	16	13	8	6	8	2	2		
play		irr						9	0,50 %
t	st	t	st						
0	5	2	2						
Teacher and Student								1598	100 %
Teacher								800	
Student								798	

Table 7.19: Frequency of social languages

The five episodes coded as “play” meant that the student was playing without any interruption or conducting a whole movement of a composition. Episodes with coding “irr” contained speech which seemed irrelevant and clearly out of the topic; like a mobile phone call. These short breaks were after all not meaningless in the flow of the lesson (see Chapter 9).

7.7.1 Frequency of the objects

Viewing the data from the perspective of the object (Table 7.20) indicates the musicianship orientation (59%) of the lessons: They seemed to focus on the musical and

technical abilities, how to perform musically. The musical competence to play or sing, which included technical, musical and pedagogical knowledge and skill, was the core focus, according to the numbers.

Object of the lesson	All		Teach	Stud
Musicianship	938	59%	478	462
Musicianship+ musical	479	30%	232	243
Musical ideal	176	11%	90	86
Musical re-contextualization	6	0,4%	3	3

Table 7.20: Frequency of objects of the lessons

The combination of musicianship and musical was identified in 479 episodes, which is 39% of all episodes. The object of musical ideal occurred 176 times, which is 11% of all episodes. As mentioned previously, the object musical re-contextualization was identified in three episodes.

The purpose of these figures is to illustrate how the social languages within the lessons relate to each other in this empirical material. The numbers demonstrate the relationship of the objects in these lessons, in particular situations. Other lessons with the same persons at different stages of the studying process could have had different balances of the object, not to mention lessons with other teachers and students. Several aspects of the collected and analysed data still need some specification in the light of the frequencies.

The age of the students did not show drastically in the figures. The numbers of the social languages *explanation* and *control of musicianship* seemed to dominate in the young cellist group lessons, the violin lessons, and also in the lessons of the professional students. However, a closer look at the table of social languages in the Appendix 4 shows that the figures were not even. The variation in the frequencies of social languages indicates different emphases and intentions between teachers and students and between the lessons. However, the frequencies of the objects illustrate clearly the tendencies of their musical and pedagogical meaning construction.

It is important, though, to point out that the relative number of the objects does not necessarily reflect how meaningful each object was to the teacher and students. The musical and pedagogical processes of a lesson tend to work as a whole: The episodes build on each other in constructing a musical and pedagogical curve or sequence. In these sequences, one

episode with a different object from the majority of objects was sometimes more meaningful than many episodes before or after. For example, the episode with the object musical re-contextualization in the cello group lesson L18 culminated the preparation sequence of the earlier episodes. The warming up made the musical re-contextualization as an approach possible. Chapters 8 and 9 will discuss the meaningfulness of an episode in a sequence of episodes with the intensity ratings.

The frequencies of objects hint, however, towards a hypothesis that the change in the balance between different objects would presume a change in the teaching and learning strategy, and in the musical and pedagogical situation and approach. For example, when the participants concentrated on a new song in the second part of the second vocal lesson (L16), the numbers were quite different from the first part. The first part contained mainly vocal sound producing exercises, which included both physical adjustments and aesthetic sound elaborations, whereas, in the second part, they focused on getting acquainted with the composer, and with the details of the composition.

Object	First part	Second part
mship	25	7
mship+ mcal	1	16
mcal	0	5
all	26	28

Table 7.21: Division of objects in the vocal lesson L16

The descriptive digits were quite clear and obvious in this example. The shared object of the teacher and the student was *musicianship* in the first part of the lesson. The object was musicianship in 25 episodes and in the second part it was the object in 7 episodes. Whereas only one episode had an object of musicianship + musical, and there were no episodes with musical in the first part of the lesson. The objects of musicianship + musical and musical however dominated the second part with 21 episodes together.

The example above shows that a radical change in the relationship between the objects was possible and also appropriate in this lesson. As an outcome, the participants appreciated the change of focus in the lesson. They commented that the student recovered from the voice exercises focusing on her competence of sound production by concentrating on the music. In the other lessons of this study, the division of objects was not so absolute: the objects changed within sequences of episodes supporting the teaching and learning strategy of the musical and

pedagogical purpose and material. The changes in the balance of the objects of the lesson activity seemed, however, to follow the intensity ratings. Therefore, I will discuss further the matter of the lesson object balance linked to the Intensity of Interaction in the next chapters.

The frequency of different social languages and objects gives grounds to briefly conclude the dominant aspect of musicianship in the lessons. The tendency to cultivate musicianship and musical ability of a performing musician in these lessons had a historical and cultural background: the teachers and students, as representatives of the tradition, expected to gain development in musical skills (e.g. Nerland & Hanken 2002; Gaunt 2006; Hanken 2008). The work on musical skill has often been considered obvious in the institutional tradition of Western music and in the domain of each instrument in general. Professionalism and the culture of competition, where success is an important outcome of musical studies, have supported the teachers of the Western tradition to concentrate on musical abilities (e.g. Bowman 2002; Regelski 2005).

More closely, the inner intensive function of the observed lesson activity unfolded in the practical problem solving of musicianship. As Elliott (1995) argues in his praxial music education theory, music has a practical nature to start with. Therefore, it sounds quite natural that the problem solving in the instrumental lessons of this study was focused and oriented on musicianship. Consequently, one could argue that developing musicianship is an overarching object of instrumental teaching and learning, which includes the musical ideal and contexts. However, through a more distinct definition of objects in lessons, the current analysis could extract emphases of the teacher-student meaning construction. These choices between objects of musical ideal and musicianship, as the Table 7.21 shows, seemed often situational and social in nature.

As discussed in the introductory chapters, the decisions in the lessons also were in connection to the prevailing tradition and experiences of music education, for which studies of music education philosophy have offered valuable perspectives. Drawing on Westerlund's (2002) philosophical work, I have introduced the object of musical re-contextualization. Music education philosophy does not, of course, foretell on what and how the teachers and students (should) concentrate in their musical and pedagogical work, but it offers options. In the light of the figures, *musical re-contextualization* as a common object of instrumental music lesson activity is not typical. Furthermore, based on this data, it appears that the more

frequent application of musical re-contextualization in teacher-student work necessitates a cultural and pedagogical change to support the use of new contexts in instrumental lessons. The three lessons (L17, L18, and L22) with episodes of musical re-contextualization had a special place in the lifespan of the teacher-student work. The cello group lesson L18 was the first and L22 was the last, and the flute lesson L17 culminated the rehearsing process. These lessons also had a structure, which enabled the application of a new context. Moreover, the meaning construction of the lessons was creative and multilayered. Therefore, musical re-contextualization carries important possibilities in the zone of proximal development of instrumental pedagogy.

Furthermore, in the musical process, another aspect concerns the motivation and involvement: the perspective of the optimal experience presumes skill development. The flow of music making (Custodero 2002b; Csikszentmihalyi 1990) requires development in musical and physical ability, because the performer needs to have a constantly good balance of challenge and skill level in order to maintain the optimal experience. The simplified implication would be to see a composition as a challenge and the ability to perform the music as a skill. However, in musical engagement, these two are not separate. Rather music making is a fusion of doing and perceiving. This fusion is in harmony with Dewey's observation of children's play, in which "idea and act are completely fused" (Dewey 1934, 178). As music making unfolds in time, it bridges the schism between product (e.g. musical growth) and process (e.g. skill development). Still, in instrumental teaching and learning, diverse emphases and conceptions among teachers and students in developing musical growth and competences may create tensions. The discussion concerning tensions in relation to the Intensity of Interaction continues in Chapter 9.

7.7.2 Episodes with different voices

The episodes with different voices usually started something new during the lessons. Often they indicated a change or a shift in the teacher-student meaning construction. Shifts and deviations in the lesson script were in the interest of the analysis, because the different voices indicated changes in the balance of the teacher-student communication and in Intensity of Interaction as well.

Almost every episode had two voices, and most of them were identical with each other. The table in Appendix 4 supports the interpretation that both the teacher and the student actively attended to in the musical and pedagogical meaning construction in all lessons: the teacher–student numbers were equal. Social languages appeared in 800 episodes for teachers and 798 for students. The numbers for each social language were quite equally distributed for both parties. The total number of voices did not, however, show the mutual variation across each social language, because some episodes (107) had two different voices (Table 7.22) and a couple of episodes (12) had only one voice (see Table 7.28). In the following section I will introduce the approach to interpretation of episodes with unequal voices.

Different voices in an episode meant that the teacher and the student constructed musical and pedagogical meanings from unequal perspectives or by different modes of communicative activity in one episode (see also, Engeström, R. 1999b). The lessons had 107 episodes with two different voices, out of which 26 episodes were with two different objects, including 11 episodes in the same mode of communicative activity and two different objects. The same object was in 96 episodes with varied mode of communicative activity.

Episodes with two unequal voices		
Teacher	Student	
explanation	control	75
control	explanation	2
explanation	narrative	7
narrative	explanation	2
control	narrative	2
narrative	control	8
		96
Same mode and different objects		11
		107
(Episodes with different mode and objects)		(26)

Table 7.22: Frequency of combinations of modes of communicative activity

The most typical variation in mode, which also seemed to construct and follow the script of the lessons, was an episode with explanation and control. Explanation, usually by the teacher, started a new theme or topic. The student responded, performed a trial or played along with the explanation, which in my interpretation was control of whatever was the topic of the episode. The total number of these episodes of explanation with control was 75. This

combination was found in all except four lessons. The combination the other way around was rarer: with the teacher controlling and the student explaining in two episodes. Seven episodes were with teachers' explanation and students' narrative, and two episodes the other way around. Teachers' control with students' narrative was identified in two episodes, and teachers' narrative and students' control appeared eight times.

Teacher-explanation and student-control

In the interpretation of the most common unequal episodes, the combination of teacher-explanation with student-control, the teachers' explanation had an immediate or simultaneous response of control. The control, as a mode shared by both, followed and continued usually in the next episode.

Lesson 17	Diving tone, "Fill up the room"			Octaves	Scale	
Teacher	xpl/ ima, snd/ mship	ctrl/ snd/ ms	xpl/ ens, har, snd/ ms	ctrl, ima, dyn, snd/ ms	xpl/ har, dyn, ima/ mc+ ms	xpl/ snd, prf/ ms
Students (2)	ctrl/ ima, snd/ mship	ctrl/ snd/ ms	ctrl/ snd/ ms	ctrl, ima, dyn, snd/ ms	ctrl, snd/ mc+ ms	ctrl/ snd, prf/ ms
Dur	50	57	49	139	40	35
Episode	2/60	3	4	5	6	7

Table 7.23: Teacher-explanation and student-control in flute lesson L17

The flute teacher in episode 2/60 (Table 7.23) introduced the "diving tone" for the students who started exploring the tone while she was explaining. "At the same time you fill yourself up with the tone, you dive into the tone and fill the room up with the sound of the tone." They were working by imagination (ima) and with sound (snd). The object was musicianship.³² After working on the tone for 57 seconds (episode 3), the teacher explained (episode 4) that she would withdraw from the playing and the students should communicate in octaves giving impulse to the other student, and listening to each others sound. They were working by ensemble (ens) and on harmony (har), because they played together and tried out different tonalities and timbres. The object was musicianship, because they had no direct connotation to musical patterns. Their exploration of the tone production continued in episodes 6 and 7 without a break. The teacher added directions for the students to play any

³² The analysis in the parenthesis refers to the abbreviations in this excerpt. See the chart of abbreviations in Appendix 7.

scale between the octaves with diminuendo in the end. (The scale was a sign for a change of the object: musical+musicianship).

Teacher-control and student-explanation

The other five combinations of mode of communicative activity each had a significantly special character. The two episodes with teacher-control and student-explanation were exceptional. In the violin lesson with the male student (L9, episode 4/27), the teacher controlled the student's bow technique, while the student was explaining how he had been working. In the cello group lessons, the teacher controlled the students' process of tuning the instrument, while the student explained, wondering, if she could manage with the cello. The student in this episode (L19, 3/49) was an adult (a parent of a boy was acting as a "student" just for the tuning period).

Teacher-explanation and student narrative

The seven episodes with teacher-explanation and student-narrative were important from student activation perspective: student initiatives especially characterized these episodes. Students reacted spontaneously to the teacher's explanation by imaginative and personal ways of thinking and experiencing. A direct report on 'my life' was rather rare, since it did not seem to belong in the script of these lessons. As an exception, the vocal student was telling about her personal feelings and experiences. They started the singing lesson (L16, 2/54) by briefly commenting on the previous class performance of *the 'Rejoice' by Händel*, which she had performed just after a trip to a foreign country: "I almost panicked, because I thought I should perform this in a week and I hadn't looked at it with a pianist at all." (Stim. L16)

In the data, more common than telling personal experiences was the imaginative musical storytelling and role play. In the cello group lessons (L19, episodes 27 and 42/49), the students reacted by imagining how the music would work as a story. In episode 27, after finishing with the sun song, the teacher introduced the next section with a bag full of soft toys. One boy commented at the same time that the sun was behind the column. He was still processing the sun song, they had previously played together. At episode 42 of the same lesson, the same boy took initiative to put stamps on the teacher's cello. The teacher was explaining important positions on the cello for the boys by placing the stamps on her self and

the cello. The boy had his own ideas on how the stamps would decorate the cello (for the overall context see Figure 6.5 in Chapter 6).

In the violin lesson L7 (Table 7.24), the teacher and student used a narrative of musical ideal to deepen their musical expression. They had just been playing the beginning of the *Concerto in G by Mozart*. The teacher's initiative was in episode 7: "What happens here? You have your story (...)". The student had prepared a story by herself. They continued adding emotional aspects to the story of a burglar hiding in the bushes. In the next episode, the teacher explained that the student cannot just glue the images with a plaster onto the music (episode 8). The student continued the story: "oh, it could continue the burglar hears that someone is moving there". The teacher continued the episode by explaining about the real affects in music: "You should have an image, which is strong enough so that you do the dynamics for real. Now it is (...)". They continued by playing and controlling in the following episodes.

Teacher	nar/ ima/ mcal	xpl/ ima, dyn/ mcal	ctrl/ int, ima, tch/ mship
Student	nar/ ima/ mcal	nar/ ima/ mcal	ctrl/ int, ima, tch/ mship
Duration	82	129	73
Episode	7	8	9
IIR%T		90	
IR%St		30	

Table 7.24: Teacher-explanation and student-narrative in violin lesson L7

Note that the intensity rating by the student is 30% while the teacher gave 90%. The student commented on her absence, loss of eye contact, and glancing around. This was actually in line with the teacher's extra-musical comment to the student about stamping the images on the music. According to the student's comments, this was the way she felt at that very moment.

Vocal lesson L15			
Teacher	xpl/ art/ mc+ ms	nar/ art, emo, dyn/ mc+ ms	
Student	nar/ ima, bd/ mc	xpl/ art, emo, dyn/ mc+ ms	
Duration		18	45
Episode	44/53		52

Table 7.25: Explanation and narrative in vocal lesson L15

Another narrative mode of communicative activity was in the vocal lesson L15. The student started episode 44 (Table 7.25) by showing and singing in a prayer position the part of the Mussorgsky song and asking at the same time: “Is it in the beginning like this,” (opening her hands), “or like this?” The teacher remained in the mode of explanation: “Yes, it was good (...) you can do what ever you like when it is real.”

Teacher-narrative and student-explanation

The combination of teacher-narrative with student-explanation occurred in two episodes. In episode 52/53 at the vocal lesson L15 (see Table 7.25), the student started the episode by asking again: “Is it like ta, tata...” (riding a horse). The teacher continued with her imaginative expression on the music: “Hop, hop was very funny, (...) so that they don’t go *phiuu*” (blows and swings her arms wildly around). The student moreover stated that she understood what the teacher meant.

The student did not add nor continue the narrative by her own efforts, therefore her response shifted to explanation. These were actually the concluding messages of the lesson, because the episode had reached the very end.

Teacher-control and student-narrative

This combination occurred in two episodes in the cello group lessons. The first example shows how the teacher initiative transfers into student activity, which also adds to the original idea. The teacher bounced the ball, asking the students to join the rhythm by clapping their hands. She introduced the use of the ball in episode 21 and controlled in the next (22) the clapping with separate throws of the ball (Table 7.26). In episode 23 she introduces the song (Twinkle, Twinkle) and how they would sing and clap together with her ball bouncing. The singing, clapping and bouncing was a success until the teacher lost the control of the ball and ended up running after it in the class. Nevertheless, the boys continued the song and clapping with a smile and self confidence. One boy reacted quite surprisingly (episode 24) on the loss of the ball: “The star dropped accidentally.”

Cellos	Ball		Sing+clap	
Teacher	xpl/ tch/ mship	ctrl/ rtp, ens, ima/ mship	xpl/ body, rtp, ens/ mcal	ctrl/ rtp, ens, ima/ mship+ mcal
Student	ctrl/ tch/ mship	ctrl/ rtp, ens, ima/ mship	ctrl/ body, rtp, ens/ mcal	nar/ rtp, ens, ima/ mship+ mcal
Duration	:40	:22	:05	:47
Episode	21	22	23	24

Table 7.26: Teacher-control and student-narrative in violoncello group lesson L18

The boy added his own imagination to the pedagogical interaction, which emerged from the song ‘Twinkle, Twinkle Little Star’. By connecting the rhythmical exercise, the words of the song, and the accident of dropping the ball, he created the narrative mode of communicative activity. His independent comment exemplifies the resources of student imagination, which came forth after creative teacher involvement and emotional devotedness.

Teacher-narrative and student-control

The combination of teacher-narrative with student-control came close to the most common combination, that of teacher-explanation and student-control. Two out of the eight narrative and control episodes were in the violin lessons L6 and L7 and not surprisingly, six of them were in the cello group lessons, in which the teacher worked with a group of four and five year old boy cellists.

In the violin lesson L7 the story of the burglary continued. In episode 23/33, the teacher added further to the story: “The joy is over there, you are smiling,” (she sings), “the burglary is smiling (...) if you think of a wedding you should be completely happy,” (she sings ...). At the same time, the student plays.

In episodes 29–31 of the lesson, the cello teacher introduced and played along with the group a minor third motive, the *Cuckoo* motif.

Cellos	Cuckoo			Bird whistle			
Teacher	xpl/ ima/ mcal	nar/ ima, tch, har, ens, prf/ mship+ mcal/	ctrl/ rtp/ mship+ mcal	xpl/ ima/ mcal	ctrl/ ens/ mship	ctrl/ ima, ens/ msip	ctrl/ tch, body, ens/ mship+ mcal
Student		ctrl/ ima, tch, har, ens, prf/ mship+ mcal/	ctrl/ rtp/ mship+ mcal	ctrl/ ima/ mcal	ctrl/ ens/ mship	nar/ ima, ens/ msip	ctrl/ tch, body, ens/ mship+ mcal
Duration	:48	:95	:58	:58	:26	:22	:77
Episode	27	28	29	30	31	32	33

Table 7.27: Teacher-narrative and student-control in cello group lesson L20

The teacher introduced the next song with a cuckoo flute in episode 27 (Table 7.27): “For the next song I need this, how does it (...) you know what? I don’t remember. The cuckoo was just in here, but now it has escaped.” She asked the boys in her narrative (episode 28) to find the cuckoo in their cellos: ”Do you have a cuckoo in your cello?” Each of the boys played the Cuckoo motif separately, controlling their own playing. She played the cuckoo with the piano along with the boys controlling, as always, their bow, gesture, intonation, and that they would play together on her sign and when she changed the tempo (episode 29).

The second of the two teacher-control and student-narrative episodes occurred in the same lesson in episode 32. The teacher had taken another bird whistle instrument and asked: “Listen, is this the Cuckoo?” The boys tried one by one to produce similar high sounds on the cellos (30). The teacher guided them in sliding their fingers on the strings producing flageolets together (31). In episode 32, the teacher was about to address a song, in which the boys should listen and play the bird sounds only when the teacher suddenly stopped. One boy, however, started to play his bird sounds with a lot of energy. The teacher controlled him by saying, “The door to the magic forest is closed until I stop playing.” In my interpretation the student’s playing was a narrative continuation and reaction to the musical moment of episode 32. Contrary to the teacher’s advice, they all played the bird sounds in the middle of the teacher’s playing in episode 33.

Episodes with a single voice

An episode with one voice only meant that the teacher or the student had a distinctive meaning construction without immediate response, or continuation in action by the other person (Table 7.28). For the students, all five single episodes were playing or singing. In these episodes, the teacher neither conducted nor interfered with the musical production.

The seven episodes for teachers were short intermediate remarks without any response. The two comments at the violin lesson L3 were, in my interpretation, not really meant for the student. The teacher had two comments, for which she did not expect any response from the student, concerning: (i) how much the student had grown, and, (ii) her warnings to the student not to practice too much. The single episodes in the lesson (L4) were announcements to move to the next musical work, which was the *Telemann sonata*. The other comment was a final

‘good luck’ statement. She uttered both of them somewhat to herself, with her back to the student. No answer came nor was one expected.

Voice Lesson/ Instrument	Episodes with a single voice					
	xpl/msh		xpl/ mcl		play/ sing	
	T	St	T	St	T	St
L3 / Violin	2					2
L4 / Violin	1		1			2
L5 / Violin ,			1			1
L6 / Violin					1	1
L8 / Violin					1	1
L11 / Violin	1				1	2
L15 / Vocal					2	2
L17 / Flute	1					1
	5		2		5	12

Table 7.28: Episodes with a single voice

Some irrelevant, rather trivial episodes offered a welcomed break in the intensive flow of the lessons. As one teacher commented “nobody can or wants to maintain a high intensity constantly”. For example, in the violin lesson L11, the teacher answered the mobile phone and in the flute lesson L17, the teacher commented at the end of the lesson on the camera I had left alone running in the class.

7.8 Disturbances and innovations in episodes

Some episodes, which seemed to diverge from the script, I interpreted as interruptions or disturbances in the interaction. Disturbances are unintended deviations from the script (see Section 4.8). However, the very same episodes could be seen as innovations. Innovations are, in Engeström’s (1999b) understanding, also divergences from the script. She writes that “the ruptures of interaction refer to a block in the flow of information or a hole in mutual understanding” (Engeström 1999b, 259). They can be born out of questions or comments that open or expand the discussion or the action to new areas by ideas, solutions or kinds of discussion. In the lessons examined here, student initiations occasionally broke the script. Their questions, insights, or innovations often led to a new kind of script. This script

development was often due to allowing and encouraging student initiatives and responses. The outspoken call for more active part of the student in the script of the instrumental music lessons was also evident in Tuovila's (2003) longitudinal study of instrumental teaching and learning.

An example of an innovation was in the violin lesson (L10) (Table 7.29). The teacher and the student had been working on the pulse. The teacher thought the student played the Vivaldi by dividing the measures into too small of rhythmic units: "I feel you still go on in eighth notes (...) I can see how you nod like this," (shows).

Epis	Teacher	T	St	Student
4/29	Semmonen tunne et sä edelleenkin mielessäs menet kahdeksasapulssissa eikä se oo itseasiassa pelkkä tunne sen näkeekin kun sä nyökät tälleen (Laulaa liidaa). [I feel that you still go on the pulse by eight notes in your mind, and it is not only a feeling, I can see it as you nod like this (sings and conducts).] Liidaa (conducts)	ctrl/ rtp/ body/ mship+ mcal	ctrl/ rtp/ body/ mship+ mcal	ok yks taa tadi taa (laulaa puolet nopeammin) [(Sings in double tempo).] Soittaa [Plays]
5	Liidaa hm mi että jos sä ajattelet neljäsosa sykkeenä puolta harvenpana sykkeenä vähän nopeampana pystytkö vaihtaan huomiseen mennessä -- hyvä on uudestaan -- sopii [Could you change your thinking of the pulse into fourth notes, half from the eight note pulse, a little faster tempo until tomorrow—good again – ok.] No niin mut taiteilija ottaa nyt -- kyl se ihan , kyl minä voin vastustaa ääneen jos must tuntuu siltä (asettelee selloalustaa) [Please, the artist takes now again—yes it is ok and I can resist if I feel like it.]	xpl/ rpt/ mship+ mcal	nar/ ima, ens, perf/ mship	kyl mä pystyn -- eiks ois kiva saada sello -- tuutsä soittaa selloa mukaan -- nyt tässä jos sä meet hakemaan sellon- -- mä oon taiteilija toi on vaan toi kääkättävä ukko tuolla nurkassa joka huutaa, että soita näin -- ei vitsi vitsi [Yes I can – would it not be nice to have a cellist – would you play? – yes, here if you go and get your cello – I an the artist, he (the teacher) is only shouts in the corner: play like this—joke, joke.] taiteilijalla meni vähän persuksilleen se kolmas osa, voi voi pakaran pakaran [The artist got on his ass in the third movement, pakaran, pakaran...]

Table 7.29: Students innovation in violin lesson L10

In episode five, the teacher continues explaining the fourth note pulse.

T: Could you change it for tomorrow (for the performance)?

The student said he could, and added that it would be nice to have the violoncello. Then he said to me (the researcher):

St: Would you play along (...) now. Could you just go and get your cello. I am the artist. Grandpa (the teacher) 'kääkättävä' in the corner shouts comments, (...) just kidding.

On any other occasion, calling the teacher as “kääkättävä ukko” [gagging grandpa] would have constituted unacceptable behavior. Asking the visiting researcher to get his cello was also a bold move by the student. The student took the initiative in his narrative comment, to have the continuo-cello along. His innovation proved to work, because the pulse became more natural with the cello later on. The student’s comment could also have been a harsh interruption of the teacher’s script, if the teacher had chosen to interpret it in that way.

In the lessons, I recognized episodes with innovative actions, which the teachers and students constructed together. These were episodes with equal voices that seemed to follow a script. The unequal episodes that did not follow a script consisted of possible internal contradictions, and also innovations. Innovations can be understood as a ‘creative potential’ of speech and action, a production of small conventional changes. R. Engeström (1999b) argues that the interaction is full of situational potential, which teachers and students do not see because of its conventional output. The interaction seems conventional because the participants use the given cultural tools in producing something unconsciously new. The teacher and student construct what they are doing in a new way.

This analysis pays attention to disturbances, since they presumably are important elements in understanding Intensity of Interaction. In Activity Theory, innovations, dilemmas and disturbances are considered to be manifestations of inner or outer tensions and contradictions in human activity (Engeström, Y. 1995). They are not seen as ‘problems’, but are rather “perceived as important sources of development and evolvment” (Engeström, Y. 1995, 62–65). Thus, naming or conceptualizing something, such as a question or an objection, as a disturbance does not mean that it is somehow problematic and should be eliminated. To the contrary, disturbances may reflect a pivotal element of the activity which may enrich its development.

In the lessons I examined in this study, the expected and the maintained (actual) ways of working sometimes included involuntary divergences. These seemed to be unavoidable, and were seen as essentially belonging to the learning process. The lessons had episodes with disturbances, and disturbances seemed to belong to the script of an instrumental music lesson. As an alternative for stopping or getting stuck into disturbances, the option of facilitating musical flow stimulated most of the teacher-student work in the lessons. Constant flow of the musical elaboration and personal development of a musician appears to be impossible and

even unnecessary for the sake of learning. Learning by crisis, as an eventually occurring tendency, came through in comments of every teacher and some students. The internal contradictions and implications that arise concerning these matters will be discussed in the concluding chapters.

The next excerpt exemplifies student initiative, which showed strong volition. After rehearsing the etude in the violin lesson L9 (Table 7.30), the teacher asked the student to play some music. But the student reacted:

St: No, now I will play this (etude), because I have practiced it.

He took the opportunity to show how well he played the etude, or that he had done his homework.

Epis	Teacher	T	St	Student
6/27	Ok no niin nyt hei jotain musiikkia [Ok, now some music, please.]	xpl/ org, tch/ mship+ mcal	xpl/ org, tch/ mship+ mcal	
	Ahaa no ota oma suosikki millätavalla haluat käyttää jousta, ja sit aloita [I see, take your favourite, how do you want to use your bow, and then start.]			Ei, nyt mä kyl soitan tän kun mä kerran tän opettelin alust loppuun tiedäksä [No, now I will play this (etude) since I have practiced it from the beginning to the end.]
				soittaa (legato) [Plays (legato).]

Table 7.30: Student initiative in violin lesson L9

In the next episode (Table 7.31), the student underrated his performance by saying it did not go so well after all. The teacher asked whether he wanted to know, where it did not go so well.

Epis	Teacher	T	St	Student
7/27	Suurin piirtein [It was generally good.]	xpl, prf, int/ mship	xpl, prf, int/ mship	No sinne päin [It was so and so.]
	Eiku aka paljonkin sinnepäin [No it was very much so.]			No meni vähän (läskiks?) [It did not work.]
	Haluuks tietää missä? [Do you want to know where (it didn't work)?]			Joo meni ...läskiks? [Yes, it didn't work.]
	Siin toisessa aivan ja sit täällä toi sotkeentu -- da da da [In the other place yes and again here you messed it up.]			Joo mut hei se on vaan etydi [Ok but it is only an etude.]
	Se oli tosi paljon parempi -- mutta mitä siihen tarvii saada lisää? Enskertaa varten			(Hymähtää ja katsoo kysyvästi) [(Laughs and looks questionly).]
	[It was much better — but what is needed for the next time?]			
	puhtauden kanssa [With intonation....]			

Table 7.31: Student underrating, L9

In his reply, the student questioned the aesthetic value of the etude: “It is only an etude”; meaning that the playing didn’t have to be so musical, clean or perfect. The activity of the student was not a disturbance by itself. The pedagogical script in instrumental music lessons actually expects student initiative. An active student musician is the natural and hoped for outcome of the pedagogical effort (Gaunt 2006). In episode 6/27 in the example, the teacher had however already asked for something else, but the boy insisted on playing the whole etude for him.

Epis	Teacher			Student
18/27	Ja tässä (laulua) jatkatko siitä samalla karaktäärillä, samalla tavalla vai vaihtuukse siinä aihe tai tunnelma? [And here (sings) do you continue with the same character, in the same way or does the atmosphere change?]	xpl/ org, ima, prf/ mcal	xpl/ org, ima, prf/ mcal	No eiks tuol vaihdu tunnelma tuolla suloisesti kohdassa kun tää on kuitenkin aika pitkä ... [The atmosphere changes there doesn't it, in the sweet-place, because this here is rather long.] sano sun mielipide [Say your opinion.] (Näyttää) [Shows]
	Kyl kyl, mut onks nää samanlaiset? haluisiksä soittaa nää samalla tavalla [Yes, yes but are these here the same?] Would you like to play these in the same way?			Soittaa [Plays]
	Mä haluaisin et siinä ois jotain muutosta -- (Laulua) niin niin sä saat keksiä siihen jotain. [I would like it to have some change—(sings) yes you may invent something here!]			
	(Muminaa) oliksä tyytyväinen nyt olikse semmonen kun sä haluat [Mm, were you satisfied now, was it as you wanted it to be?]			
19/27	Ok osaatsä sanoa miten sä haluat sen alun minkä tyypinen se ois [Ok, can you say how do you want the beginning, what is it like?]	xpl/ prf, ima, org, / mcal	xpl/ prf, ima, org, / mcal	parempi ei vielä perfekto [Better not perfect yet.]
	Se voi olla sotilaallinen ok [It could be militaristic.]			Se voi olla sotilaallinen [It could be like military.]
	Mä haluisin sulta! Aivan se on totta että opeta.. [I would like to hear it from you – I see it is true: teach me.]			se voi olla sotilaallinen sano nyt -- (sun mielipide) [It could be military, say now (your opinion).]
	Niin [Yes]			Nimenomaan - - mä kysyn sulta [Exactly -- I ask you!]
	Ok (laulua) [Ok (sings).]			No alku sotilaallinen, sit tulee tilulullaa kohta - - ei vaan se menee ylös - niin no kuitenkin eiks se oo vähän semmonen siirappinen [Well, the beginning is military, then comes the tilulullaa place—no it goes up – anyway, isn't it kind of syrup-like.]
	Jatkuuko se siirappi kuin pitkään - - [Does the syrup continue for a long time?]			
	Kokeilepa niin [Would you try?]			(laulua, rytmää jalalla) [(Singing, tapping rhythm with the foot).]
				Soittaa [Plays]

Table 7.32: “Teach me!” in violin lesson L9

Another divergence from the script appeared later. The student seemed to expect it. In the episodes 18/27 and 19/27 the teacher starts asking the student about the character of the music (Table 7.32). But the boy avoids answering to the teacher's question. He throws it back to the teacher:

St: Say your opinion.

He expresses that the teacher knows the truth by saying:

St: Teach me!

In their discussion, the student had opinions of, for example, the military character of the music. However, the student squirms and hesitates while making arguments about the music. Note the object is constantly musical; still the student seems to be interested in how well he was doing in the lesson. In my view, his attitude about not being ready to focus on the character of music became an obstruction in the conversation. Similarly, in other lessons as well, students thought that successful accomplishment was a criterion for approaching music musically. The plot of the lesson culminated in the last two episodes where the student asked how well he did in the lesson (Table 7.33).

Epis	Teacher	T	St	Student
26/27	Tota; (hm hyräilyä) noiksä teet [Well, (humming) is this how you will do it?]	xpl/ ima/ mcal	xpl/ ima/ mcal	Kyllä lisää siirappisuutta
	No vähän, [A little bit.]			[Yes, more syrup!]
				Vähän? you are not happy to that..
	en mä mitään sellasta, olin vaan samaa mieltä [Nothing of the kind, I just agreed.]			[A little? Are happy with that...]
27/27	kehunko mä sinua liian vähän kun sä tavallaan niinku ongit...[Do I praise you too little, because you seem to dig up?]	xpl/ prf/ mship	xpl/ prf/ mship	oiko yleisilme ihan jees?
	joo saa [Yes you may.]			[Was the character generally ok?]
	Sä oot menny hurjasti eteenpäin tän asian kanssa sitä paitsi sulla on oikein kivasti ideaa tossa mitä sä teet, se ei oo vielä valmista mutta sulla on silti oikein hyvää ideaa tässä. Koitetaan saada tää seuraava osa tonne nyt ens kerralla semmoseen luonnosvaiheeseen, et siitä voi keskustella jotain [You have developed with this tremendously, and in the matter of fact you have ideas in what you are doing. It is not yet ready. Let's try to get the next movement to a sketch stage, so that we can discuss it.]			Mä tavallaan kehun itseäni, et kyl mä tavallaa jossain onnistuin
				[I sort of praise myself, I succeeded in something in my way...]
				ok

Keskustella samaan tapaan et millaisia ne fraasit on, et mitä yritetään, et päästään tonne asiassa eteenpäin. Vähän pitempään pitäis olla ennenkun kannattaa (?) [Discuss in the same way, what kind of phrasing, what do we try, so that we can go on with it. A little more work before it is worth looking at...]			
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Table 7.33: Asking for praise, L9

In the last episode, the teacher commented on the student's need for praising. The student replied:

St: I sort of praise myself, because I succeed in a way at least in some things.

Behind all of these vague disturbances lay the fact that the student had not practiced enough for the lesson. He wanted to be sure that he was accepted as a person, or even as a violinist, or a student. By his initiative, the student seemed to show that he had will power and a vision of his own: Look and listen, I am a creative and musical person behind all the mistakes and unprepared reality.

A positive disturbance, innovation, occurred during the next lesson L10, because the student showed musical activity and initiative not only in his playing, but also in organizing the situation (Table 7.34). The lesson preceded a performance in a concert, for which he was going to play a *Sonata by Vivaldi*. This time the student was emotionally and technically well prepared and self-confident. It was also evident that he could receive and apply directions concerning a quite big and important change in the pulse.

The student took the initiative by asking me, behind the camera, to play the cello with him (see also Table 7.29). He was leading the situation; he was the concertmaster of the lesson. The teacher was able go along with the student's initiative, and to use the cello for the purpose of modifying the pulse change.

Epis	Teacher	T	St	Student
16/29	Ok, milt se tuntuu - pelastaa, pelastaa - - niin on [How did it feel like—yes it saves—yes it is.]	xpl/ ens/ mship	xpl/ ens/ mship	Kyl se sello vähän niinku pelasti - - tää on paljon kivempi sellon kaa kuin pianon [The cello saved—this is much nicer with the cello tha with the piano.]

Table 7.34: Inspired Vivaldi in violin lesson L10

The student was inspired by the chamber music way of working and wanted to have the cellist also in the concert. “The cello kind of saved (the music) – this is much more fun with the cello than with the piano.”

7.9 Summary

The above examples attempt to articulate the instrumental lesson activity through dialogue in detail. This chapter has presented the episodic musical and pedagogical meaning construction by adapting and applying the Method of Voices within the framework of Activity Theory. The Method enabled an episodic structure for the analysis. The analysis articulated the emphases within the teacher-student meaning construction by objects of the lesson and modes of communicative activity. The variation of the social languages demonstrated different features within the teacher-student problem solving, highlighting dialogic harmony and unity of voices on one hand and dialogic dissonance and different voices on other. Both tendencies had specific musical and pedagogical purposes in the flow of the lessons.

Consequently, for understanding and demonstrating Intensity of Interaction, chapter 8 continues this analysis by combining the intensity ratings and the episodic analysis of the musical and pedagogical meaning construction. The subsequent analysis examines the sense making process of participants, perceived in significance of each episode and series of episodes within music lessons.

Chapter 8

Results III: Instrumental teaching and learning connected to Intensity of Interaction

As a starting point for this study, the introductory chapters stated generally that the construction of meanings in relationship with the context or the situation in which the parties cooperate is central to examination and understanding of Intensity of Interaction. Accordingly, meaning construction is a significant factor in the attempt to understand the intensity of joint activity in instrumental music lessons. The questions relevant at this point are: How significant was the meaning construction in the lessons for the teachers and the students? How meaningful were the separate and combined episodes? These questions would offer an unwieldy challenge, if we discussed the overall values of musical and pedagogical interaction in general, rather than in terms of a specific focus. Therefore, this study has a narrowed approach to the activity of local instrumental music lesson and has focused on the construction of the episodes with teacher-student actions and operations. This perspective, derived from Activity Theory, acknowledges the cultural and historical connections of the activity and, at the same time, allows a focused examination of details within an activity system. Consequently, by studying the data in light of the intensity ratings and the stimulated recall interviews via the Method of Voices, this study aims to understand the dynamics of meaning construction in local lesson contexts.

8.1 Intensity ratings combined with teacher-student meaning construction

In the following sections, a few examples will highlight how the analysis drew from the merging combination of data. The intensity ratings, stimulated recall interviews, and voice analysis were the sources of information for this analytical process. Consequently, a segment comprised of sequences of episodes constructed the respective unit of analysis for sense making (see Section 5.4.2). Some of the sequences seemed to be arousals, loosening up, building up, assembling and dismantling periods of musical and pedagogical meaning production. Some applied concrete tools, varied the object balance of the activity, merged musical elements, or changed the role or balance of the participants.

The sequences, comprised usually by two or more episodes one after the other, compose segments. A segment is a form of interaction process under a theme or an assignment, which consists of several sequences of episodes. These sequences of episodes summoned the process of signification by “naming” voices according to social languages, and by intensity ratings and the stimulated interviews. The analyst described the segments through his interpretation. They seemed to have a character of their own, and described three qualitatively different extents of Intensity of Interaction: sustained, strengthened, and diminished. They indicate an ongoing dynamics of a process, illustrating direction and the extent of interactive power or energy.

Rather than trying to identify or define Intensity of Interaction by terms referring to an absolute or static state, like high or low, this study sticks to the relative expressions of dynamics within interaction processes. Of course, high and low Intensity of Interaction would also be relative. However, as Chapter 2 stated, high or low can easily carry connotations of good or bad teaching and learning, active or passive working, and so on. Therefore, this study avoids using such concepts. Thus, pre-understandings of high and low Intensity of Interaction may induce interpretations which are misleading.

Even though the segments characterized by sustained, strengthened or diminished Intensity of Interaction seem to provide a reliable illustration of the overall dynamic process, the description of the interaction by segments remains vague. Questions arise about, for example, how the participants sustain or strengthen the Intensity of Interaction. What kind of changes are found in the musical and pedagogical communication? Therefore, the sequences of episodes add detailed information to the description of the cyclic process of meaning construction.

Lesson	Sg 1	Ep/ Seq	Sg 2	Ep/ Seq	Sg 3	Ep/ Seq	Sg 4	Ep/ Seq	
L8	dim	1+5+2	sus	2+3	dim	2+2+2	str	4+4+3+3+2+2+3+2+2	
L9	str	2+3+2	sus	2+2+5	str	4+2+2	dim	3	
L10	str	3+2	dim	3+4	str	4+4+3+1	sus	3+2	

Table 8.1: Excerpt of the division of sequences and episodes

The altering voices in the analyzed data constructed different episodes, which took forms of cycles or patterns. These sequences of combined episodes conducted the musical and

pedagogical logic and direction. The matrix of sequences in Table 8.1 shows how the sequences varied in lessons L8, L9, and L10³³. For example, the first segment in lesson 8 had three sequences with eight episodes (1+5+2). Each lesson had a form of its own. The most common sequence was a combination of two or three episodes in which the social languages were explaining on musicianship followed by controlling on musicianship or controlling on musicianship + musical.

Interestingly, the sequences often occurred in the form of a complete teaching and learning pattern. Yarbrough et al. (1989; 1993; 1994; see also Price 1989, 1992; Price & Yarbrough 1991) explained how the three step sequential patterns of (a) teacher presentation of a task, (b) student response, and (c) related and specific teacher reinforcement, occurred in the lessons (see also, Section 4.8). Sometimes, as in Yarbrough's findings, the sequences in the lessons of this study were incomplete. For example, reinforcement was often withheld for a time, resulting in a series of two-step patterns. In the three-step patterns, the content of the third step could be approval or disapproval reinforcement. These didactic structures have proven to be efficient. Price (1983) found that band directors using sequential patterns with immediate, related feedback were effective in producing good performance while maintaining high student attentiveness and positive student attitude.

However, this study found that the collaborative process of searching, finding, trying out, or elaborating musical expressions with an instrument requires longer and more complex patterns than the complete sequential instructional patterns. For example, in the 25 episodes and 9 sequences long segment 4 in lesson 8 (see Appendix 5), the violin teacher and student talked, questioned, practiced, and pondered on how to develop the sound, the melodic line, and a relaxed way of playing in Mozart. The music took over so that both parties commented and played actively. Both presented their points of view, responded, and gave feedback.

Patterns in the form of teacher presenting, student responding, and getting feedback fail to follow the multi-voicedness of the musical and pedagogical meaning construction. Complex interactive pedagogical and musical processes in the form of a question, suggestion, non-verbal musical initiations, mimicry (cf above), or reflections when the teacher and the student elaborate a musical phrase, sound, or expression construct patterns that are multi-layered, not fixed patterns. Complete instructional patterns seemed non-descriptive for the understanding

³³ Division of sequences and episodes of all lessons is in Appendix 4

of the interaction, as used in the data analysis. The more the lesson had reflections, student initiation and shared musical engagement, the less the complete sequential patterns provided information for the analysis. The analysis with complete patterns seemed, however, to be informative in situations when the teacher was actively leading the interaction, while the student followed and tried to play according to the instructions.

8.2 Teaching and learning strategies and Intensity of Interaction

The descriptions of the examined lessons have demonstrated how the methods developed in this study articulate, illustrate, and structure the complex instrumental lesson processes. The activities during the lessons have highlighted the teacher-student problem solving, which the chart below (Table 8.2) encapsulates as ten applied teaching and learning strategies.

Summary of the teaching and learning strategies
(a) Instruction by complete patterns
(b) Arousal by variation of objects
(c) Ensemble
(d) Stimulation by urgency
(e) Concrete tools
(f) Open up and ease off
(g) Changing the object balance
(h) Merging musically
(i) Assembling and dismantling
(j) Using metaphors

Table 8.2: Applied teaching and learning strategies

These strategies were identified as particularly common individual and collaborative ways of “developing musical expressivity and instrumental technique” (Hultberg 2008, 7).

The analysis found (a) *instruction by complete patterns* in all lessons. In particular, the violin lessons (L1-L4, L5-L8, and L9-L11) included systematic teacher-student work that makes use of the complete patterns (See also Section 3.2.4). Teacher-student work by the strategy of (b) *arousal by variation of objects* was usually prolonged and expanded by alternating episodes. Segments of Intensity of Interaction were sustained in lessons L5-L7, and L20, while in lessons L14, L16, L17, L21, and L22 they were strengthened. Musical work

through (c) *ensemble* and (d) *stimulation by urgency* proved to offer stimulating teaching and learning strategies by providing motivation and inspiration. For instance, the sustained, strengthened, and diminished segments appeared in lessons that preceded a performance, and featured ensemble playing with the teacher or other instruments (L3, L4, L8, L10, L12, L15, and L22). Therefore, the overall atmosphere was highly intensive and enthusiastic, while the participants were preparing music together with other musicians for an upcoming concert. The Intensity of Interaction, however, significantly differed.

Many examples of the strategy (e) *concrete tools* were also identified in the lessons. These segments were often strengthened, examples of which include movements and physical presence (L13, L14, L15, L16, L19), clapping, touching (L13, L14, L15, L16), playing with a mirror (L6) and using a ball (L14, L18). Juntunen (1998) has emphasized the connection of body movement with listening: the bodies of teacher and student function as the means of music and sound production (see also, Jaques-Dalcroze 1920/1965).

Praising and positive but accurate feedback (L8, L12, L14, L15, and L17) are actions associated with the strategy (f) *open up and ease off*. This strategy was characteristic to diminished Intensity of Interaction. These segments and sequences often consisted of reflections and relaxing “small talk”. In their comments, the participants found these diminished sequences and segments rewarding and crucial for mutual endurance.

The strategy of (g) *changing the object balance* (see also Chapter 7) enabled extension and expansion of a strengthened segment of musical and pedagogical work. Extension meant that the participants focused on something new, while expansion prolonged and added new elements to the existing working process. By use of the strategy of (h) *merging musically*, the participants were able to unite technical and musical matters while still maintaining the music’s mystical fascination (L7, L12, L17, L18, L22). The strategy of (i) *assembling and dismantling* appears to be associated almost exclusively with professionally well prepared and knowledgeable instrumental teachers. Within these strategies, teachers and students combined and separated musical, technical and communicative matters in relation to the situation.

The strategy of (j) *use of metaphors* and stories appeared in nearly all lessons (see also Section 4.7.3). However, some of the teachers commented that concrete talk and models offer more accurate and straightforward information.

8.2.1 Instruction by complete patterns

The first example demonstrates features of unbalance in the teacher-student interaction. According to the intensity ratings of these lessons, teacher and students sometimes felt quite differently about their interaction. Table 8.2 shows the distances in the ratings in one such case. The average distance (DAI) is about 30%. The teacher was energetic and enthusiastic, while the student remained rational and considerate regarding the new technique.

		Distance in average of intensity		
Lessons 1-4		DAI	IR%T	IR%St
16.4.2004	T/ St	30,5	79,5	49
30.9.2004	T/ St	28	90	62
9.12.2004	T/ St	36,9	85,9	49
5.5.2006	T/ St	27,3	84,3	57

Table 8.3: Distance in average of intensity of lessons 1-4

The student listened to the information the teacher provided to her and she started processing the elements of the new technique. However, they expressed themselves quite differently. As the chart (8.2) illustrates, the student was reluctant to react verbally, while the teacher was more talkative. Even though their communication seemed quite distant, the instruction for the new technique was evidently efficient. The analysis showed that the lesson interaction of the four lessons (L1–L4) consisted of 42 (38%) complete sequential patterns out of 112. During the segment of sequential patterns, the intensity ratings by the teacher and student supported the interpretation of a sustained Intensity of Interaction. The use of complete patterns seems clearly effective in transferring specific skills and concrete teacher orientation of a musical or technical matter. A good example was the teaching and learning of the sautillé bow technique in lessons 1 to 4 in the current data. The 14 year old girl learned and performed the “*Moto Perpetuo*” by *Böhm* (L1–L3) after three months of learning with well balanced and functioning bow technique. She followed the teacher presentation, responded attentively, and received specific feedback and reinforcement for the task.

In the example of lesson L4, the violin teacher and her student were preparing the *Sonata by Telemann* for an entrance examination. The lesson (L4) starts by a sustained five minute segment, which was a series of complete instructional sequences (Yarborough et al. 1989;

1993; 1994; Siebenaler 1997): each episode (1–7) in the segment consisted of a teacher presentation, a student response and a teacher reinforcement (Table 8.3a). The topic in the seven instructional sequences was to introduce and learn the principles and basic way of practicing the staccato bow stroke. The technique was new for the student. She obtained specific information and feedback during each sequence.

L4	sg 1	Sustained					
Topic	Staccato						
Teacher	xpl/ rtp, tch/ ms	ctrl/ tch, rtp, prf/ ms	ctrl/ prf, bd, tch/ ms	ctrl/ prf, tch, rtp/ ms	ctrl/ rtp, tch/ ms	ctrl/ tch, bd, rtp, prf/ ms	ctrl/ tch, bd, snd/ ms
Student	ctrl/ tch/ ms	ctrl/ tch/ ms	ctrl/ prf, bd, tch/ ms	ctrl/ tch/ ms	ctrl/ tch/ ms	ctrl/ tch/ ms	ctrl/ tch/ ms
Episode	1	2	3	4	5	6	7
Duration	88	58	67	54	40	55	52
IR % T	70		80	80		80	
IR % St	80		80		60-80	60-80	

Table 8.4a: Staccato bow in violin lesson L4

The first five sequences had episodes of control, except the first with teacher explanation, added information to the former sequence with only positive guidance. In addition, the teacher asked about bodily feelings in episodes 6 and 7. The object of each sequence and episode, and in the whole segment, was musicianship, because teacher and student were focusing on the body control of bow technique in a slow and even tempo. The intensity ratings within these episodes were even: both teacher and student gave equally high percentages. This equally meaningful segment for both parties turned into a rather different kind of segment. While working on the *Sonata by Telemann*, the student's ratings went suddenly down, and her comments in the stimulated recall interview supported the interpretation of unbalance.

Topic	Telemann			Play	Sound of 16th notes; turn to the violin			Play	
Teacher	xpl/ prf/ mcal	ctrl/ bd, tch/ mship	ctrl/ body, tch/ mship	xpl/ rtp, tch/ mship	ctrl/ dyn, tch, snd, rtp/ mship+ mcal	ctrl/ rtp, body, tch/ mcal	ctrl/ bd, tch, snd, ima/ mship	ctrl/ body, tch, prf/ mship	ctrl/ rtp, body, tch/ mship

Student		ctrl/ bd, tch/ mship+ mcal	ctrl/ body, tch/ mship+ mcal	ctrl/ prf/ mcal+ mship	ctrl/ dyn, tch, snd, rtp/ mship+ mcal	ctrl/ tmp, tch/ mship	ctrl/ bd, tch, snd, ima/ mship	ctrl/ tech/ mship	ctrl/ prf/ mcal+ mship
Episode	8	9	10	11	12	13	14	15	16
Duration	18	46	79	110	116	51	30	91	106
IR % T	80						90		
IR % St	60						30- 40		

Table 8.4b: *Telemann sonata* in violin lesson L4

The Tables 8.3b and 8.3c illustrate that the first sequence had four episodes with different voices. The unbalanced voices were present in each sequence: the object of the teacher was on musicianship, however, the student focused mainly on music. The teacher started in a single voice episode by introducing the music, “Let’s move to Telemann” and by controlling the student’s posture and bow technique in episodes 9–10.

In episodes 12–13, the teacher commented on keeping the 16th notes peaceful and the sound solid in the fourth position. As they went through the rest of the Sonata, the teacher focused repetitively on the student’s instrumental technique.

T: Try to keep your bow straight; don’t turn away from the violin (...).

These sequences of episodes were an example of declining intensity within interaction. The intensity ratings by the teacher were rather high, whereas the student’s ratings went down from 80 - 60 to 30 and 40 percent (Figure 8.1).

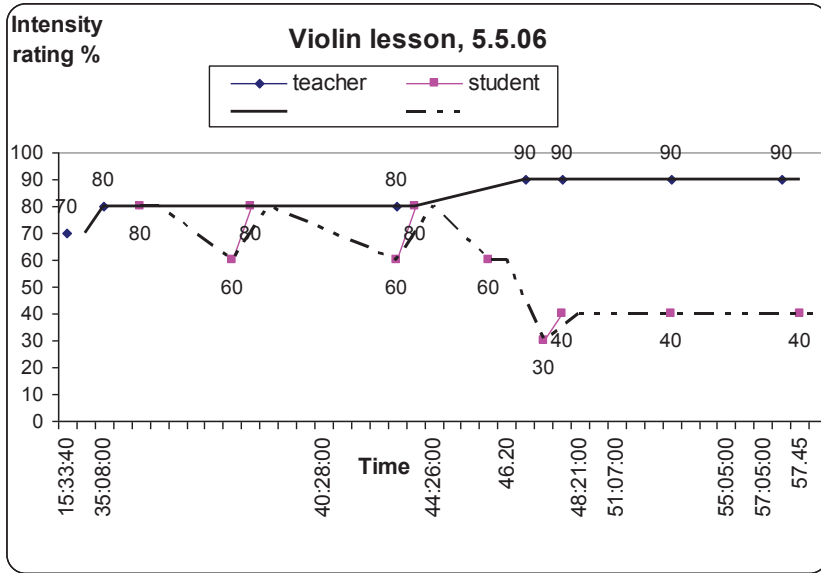


Figure 8.1: Intensity ratings in violin lesson L4

At the lesson, the student played one movement at a time in episodes 11, 16, 17, and 19. These four performances were the framework for this approximately 17 minute-long declining segment. The segment consisted of four sequences of episodes.

Topic	Play	Bow	Play	Bow	Good luck
Teacher	xpl/ prf, tch, bd/ mship	ctrl/ tech, body/ mship	ctrl/ tch, rtp, prf/ mship	ctrl/ prf, tch/ mship	xpl/ prf/ mship
Student	ctrl/ prf/ mcal+ mship	ctrl/ tech, body/ mship	ctrl/ tch, rtp prf/ mcal+ mship	ctrl/ prf, tch, rtp/ mship	
Episode	17	18	19	20	21
Duration	112	111	63	110	10
IR % T	90				
IR % St	40				

Table 8.4c: Technical feedback in violin lesson L4

Consequently, the topic of the sequences of episodes was highly technical, in contrast to what was expected based on what I thought was missing in the musical expression of the young performer. Perhaps the student was trying to focus on producing musical ideas. However, in her feedback, the teacher emphasized the instrument specific technique. The point here is not to try to explain why the sequences were unbalanced and the segment was

diminishing in intensity. In other words, the environmental, psychological, or other possible reasons that might cause unbalance of interaction are not in the focus of this study (see also Chapter 2). Rather, this and all other examples aim to analyze the lesson interaction as such, as a description, and to understand the character and elements of the activity.

The teacher probably had good reasons for her choice not to touch the music at the lesson any more. However, their interaction seemed rather distant at the end. In the stimulated recall interview they both noticed the obvious separation. The teacher commented that they both already knew that this would be one of the last lessons for them together. The student was trying to get into another institute and they had already agreed that she would continue with another teacher.

8.2.2 Arousal by variation of objects

A violin teacher and her student worked on the *Adelaide concerto by Mozart* at the beginning of the lesson. They started by characterizing the tonality, “a sunny D-major”. In these sequences of episodes the voice of the student seemingly followed the teacher’s voice.

Topic	“Sunny”, Now I know			Dynamics		Bow, vibrato		Play together, relax	
Teacher	xpl/ ima, dyn/ mcal		xpl/ dyn, snd, ima/ mcal		xpl/ ima, tch/ mcal+ mship	ctrl/ ima, dyn, tch, snd/ mship+ mcal	xpl/ dyn, tch, body/ mship	ctrl/ ens/ mship	xpl/ tch, dyn, snd, rtp/ mship
Student	xpl/ ima, dyn/ mcal		xpl/ dyn, snd, ima/ mcal		ctrl/ mship+ mcal	ctrl/ ima, dyn, tch, snd/ mship+ mcal	xpl/ dyn, tch, body/ mship	ctrl/ ens/ mship	ctrl/ tch, dyn, snd, rtp/ mship
Episode	16	17	18	19	20	21	22		
Duration	100	109	43	185	65	35	62		
IR % T		95							
IR % St	55				60				

Table 8.5: Musical search in violin lesson L5

The controlling of the combination of both *musicianship* and *musical* vanished after the first six episodes, leaving the dominance to the episodes with controlling on musicianship. They had differences in thinking, which at first were covered. Hints of disagreement were given in the student’s absent-minded seriousness and in the way she played. Her eyes frequently wandered along the walls and ceiling, and she was not smiling. She also would not verbally express what she wanted.

In Table 8.4, they searched for the form and rhythm of the musical flow by dynamic changes (episodes 16 and 17/26). The object was musical, because they focused on the ideas evoked by the composition. In episodes 18 and 19, the object was both musical and musicianship, because they started to consider concrete ways of producing the music on the instrument. The student tried the ideas on the violin, and therefore her mode was controlling. Finally, they discussed (explaining in episode 20/26) some technical details on bodily movements and how to make the crescendo. The object now became musicianship. The student said she wanted to make her hand placement more relaxed, since the hand was too high to get the bow bouncing. “Take it in the middle of the bow with an empty hand, lower it down and it will bounce (...)”

By asking many questions, the teacher tried to arouse the musical interest and emotional expression of the student. She commented that at the beginning they both were doing the same thing: “both were present” (Stim. 19.11.04). Then the student thought she was not with the teacher. The student’s intensity rating went down from 60 to 50 percent.

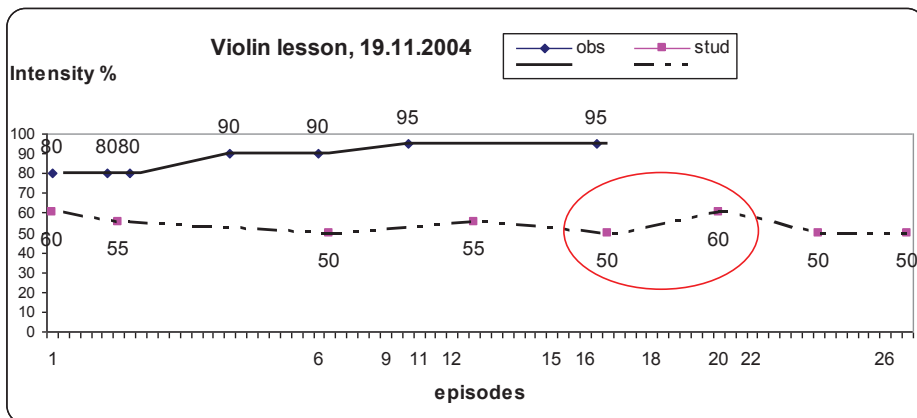


Figure 8.2: Intensity ratings in violin lesson L5

St: “It started promisingly. Then I became paralyzed. When the teacher asked me what I would think to be the best way of playing. I just adjusted into her ideas. It was just kind of playing along the teacher. I was sort of withdrawn. I just stood behind the music stand.”

The first segment in the lesson from episode 1 to 8, sustained, was searching for the music and waking the student up. The second segment from episode 9 to 16, strengthened, was filled

with suggestions. Then in the third segment, sustained, the student made an initiative on the dynamics (episode 16/26):

St: Now I know how to play it, (...) first quiet and then it gets bigger here, and then diminuendo.

The student commented on this little rise of intensity (Episode 16/26). Her interpretation was based on “Good eye contact” that she had observed by watching the video, and on longer comments by the student.

St: Good eye contact and I had longer comments, not so much questioning (by the teacher).

Her intensity ratings (Figure 8.2) also went up from 55 to 60, which was clear sign of change in her self critical scale. The ratings of the teacher were 80 in the beginning of the lesson, and at this moment reached 95. The student commented on the difference in their ratings:

St: I was so pessimistic about my playing, with comments like, ‘It didn’t go too well, again’ and ‘It sounded awful’. If I had practiced more it would be better. I was very critical about myself and my playing.

The teacher devoted 13 minutes of the 20 minute lesson to waking the student up. The student was emotionally distant. She commented on that in the stimulated recall interview.

St: I didn’t notice much difference in my playing at the end of the lesson compared to the beginning. I had no real big moments of insight during this lesson.

The varying ways of focusing on the composition and on the student’s musicianship were effective. The voice analysis in Table 8.4 shows that the object in episodes 16 and 17 was musical, in episodes 18 and 19 musical + musicianship, and in episodes 20 to 22 musicianship. She finally had opinions and a will of her own concerning the expression.

8.2.3 Ensemble and Stimulation by urgency

Another example is from a violin lesson (L10), in which a male student played a *Sonata by Vivaldi* (Tables 8.5a, b, c). The student’s intensity ratings were higher than the teacher’s ratings (Figure 8.3). Both started by giving a 75 percent intensity rating at the beginning of the lesson. However, by the end of the lesson, the student had raised his rating up to 95, while the teacher stayed constant at 75.

First they worked by seeking for a pulse in the first five episodes (two sequences, 3 + 2 episodes). In the fifth episode the teacher asked whether the student could change his phrasing into a longer pulse period for next day's performance. Perhaps the coming concert reminded the student of the co-operation with other instruments, because suddenly he took the initiative to ask me to play along with the cello. In the middle of a sentence in the episode 5/29 he said:

St: It would be nice to have a cello. Would you play with me? Would you go and get your cello.

Topic	Vivaldi	The pulse			Cello along, How was I?	Finding the tempo, music for the cellist					
Teacher	ctrl/ dir/ mcal	ctrl/ rpt, prf, dyn/ mship+ mcal	ctrl/ dyn, prf, rtp/ mship+ mcal	xpl/ rtp, body/ mship+ mcal	xpl/ rpt/ mship+ mcal	xpl/ prf, ima, har, rpt/ mship	xpl/ mship	xpl/ perf, rpt/ mship+ mcal	ctrl/ tch, rpt/ mship	xpl/ tch, rpt/ mship	ctrl/ org/ mship
Student	ctrl/ dir/ mcal	ctrl/ rpt, prf, dyn/ mship+ mcal	ctrl/ dyn, prf, rtp/ mship+ mcal	ctrl/ rtp, body/ mship+ mcal	nar/ ima, ens, perf/ mship	xpl/ prf, emo, int/ mship	xpl/ prf/ mship	xpl/ perf/ mship+ mcal	ctrl/ tch, rpt/ mship	xpl/ tch, rpt/ mship	ctrl/ org/ mship
Episode	1	2	3	4	5	6	7	8	9	10	11
Duration	16	47	59	68	79	48	10	27	16	29	16
IR % T		75									
IR % St	75		80								80

Table 8.6a: Pulse and ensemble in violin lesson L10

Consequently, the topic for the first segment (strengthened) was the pulse. They were both controlling on musicianship and musical knowledge. A lot of explaining followed in the next 2 minute segment of episodes, 6–11/29 (diminished), before the cello came (Table 8.5a). The student asked about his playing quality and posture, while avoiding the teacher's idea about correcting the pulse.

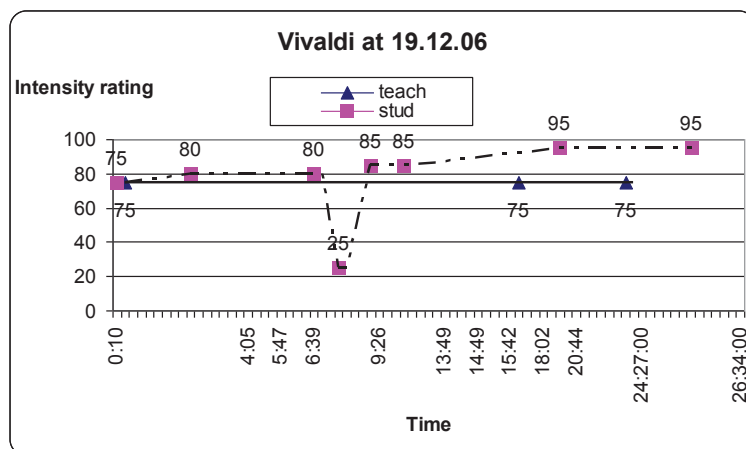


Figure 8.3: Intensity ratings in violin lesson, L10

They spent the third segment, 12–15/29 (strengthened) getting used to the accompanying cello (Table 8.5b). The student's rating of 25% in episode 13 referred to the confusion of getting started with the cello (Figure 8.3). There were quite a few things to which to listen and adjust at once: Tuning, finding the tempo together, intonation, shaping the notes. (I agreed: my feeling of confusion in the beginning was similar in my own playing with the student.) Therefore, control on musicianship was the dominating social language.

Topic	Pulse	Starting	Style, tempo	How is it?	Take again, working on style							
Teacher	xpl/ rpt, ima/ mship	ctrl/ tch, rpt, ens/ mship	ctrl/ rtp, ens/ mship	ctrl/ rpt, ens/ mship	xpl/ ens/ mship	xpl/ org, rtp, ens/ mship	ctrl/ rtp/ mship+ mcal	ctrl/ ens/ mship	ctrl/ rtp, art, ens/ mship+ mcal	ctrl/ prf, art, rtp/ mship	ctrl/ ima, rpt/ mship+ mcal	ctrl/ dyn, rtp/ mship+ mcal
Student	xpl/ rpt, ima/ mship	ctrl/ tch, rpt/ mship	ctrl/ mship	ctrl/ rpt/ mship	xpl/ ens/ mship	xpl/ org, rtp, ens/ mship	ctrl/ rtp, ens/ mcal+ mship	ctrl/ ens/ mship	ctrl/ rtp, art, ens/ mship+ mcal	ctrl/ prf, art, rtp/ mship	ctrl/ ima, rpt/ mship+ mcal	ctrl/ dyn, rtp/ mship+ mcal
Episode	12	13	14	15	16	17	18	19	20	21	22	23
Duration	45	55	51	170	14	50	29	36	77	75	67	162
IR % T										75		
IR % St		25	85			85						95

Table 8.6b: Work on musical style in violin lesson L10

They broke the sequences by commenting on the cello (16, 17/29), and on the coming performance with the accompanying pianist (24/29). The student wanted to have the cello

along in the performance. He was not indifferent; rather, he cared for a successful performance.

T: Would you like to come and play tomorrow? (17/29)

The work on musical style started in the next sequence (18–23/29), when the ensemble started to work properly. They were controlling on the combination of musicianship and musical knowledge of the composition.

For the last sequence (Table 8.5c) the student’s intensity rating was 95 percent.

St: I think this is fun, enjoyable, it develops, I concentrate. I think this is what practicing should be.

The teacher agreed. However, he remained at 75%, because he heard and saw aspects of intonation, musical phrasing, and technique that he wanted to develop further in the student’s playing.

T: Totally different atmosphere, but the other part of the work should be done some day too. If you look more carefully at your hand, or if you listen to intonation or to the form of the notes, how you keep the phrase together, there are many things that are influenced by how you handle the instrument. Anyway, this feels to be much more fruitful because of the music.

Topic	Pianist? Cellist?	Expressive bow				
Teacher	xpl/ org, prf, ens, rtp/ mship	ctrl/ dyn, rtp/ mship+ mcal	ctrl/ tch/ mship+ mcal	ctrl/ tch, prf/ mship+ mcal	ctrl/ prf/ mship+ mcal	ctrl/ tch/ mship
Student	xpl/ org, ens, perf/ mship	ctrl/ dyn, rtp/ mship+ mcal	ctrl/ tch/ mship+ mcal	ctrl/ tch, prf/ mship+ mcal	ctrl/ prf/ mship+ mcal	ctrl/ tch/ mship
Episode	24	25	26	27	28	29
Duration	104	45	63	46	61	44
IR % T			75			
IR % St					95	

Table 8.6c: Balancing emphases in violin lesson L10

The Intensity of Interaction seemed to be at its highest in the fourth sequence, (episodes 18–23/29, sustained), because they were both fully engaged in the same task of getting the pulse, phrasing, technique, and ensemble together (Figure 8.3). The student seemed to enjoy the music and he could easily change the pulse and then lighten up his playing.

St: Practicing was much more fun.

However, at the beginning, the student was not so well in tune with the teacher. Eventually, as evident from both intensity ratings and their comments, the student was inspired by the music, while at the end, the teacher remained reserved controlling on technique in the musical expression. At the same time, the student was overwhelmed by the music. Therefore, the Intensity of Interaction was strengthened at the beginning and remained sustained at the end of the lesson. Rather than reinforcing the student's enthusiasm, the teacher kept his feet on the ground by emphasizing the importance of detailed work. Consequently, the Intensity of Interaction was sustained. In this lesson, the student definitely benefited from both aspects of musical learning. Hence, fruitful management of the emerging tension between flow and detailed work, results in increasing quality both in musical expression as well as in instrumental technique.

The prolonged third segment of four sequences of episodes (13 to 24/29) was a constant flow of music making, breaking only twice by two meta-talk episodes at 17/29 and 24/29. The slight yet clear difference of emphasis between the teacher and student did not appear in the voice analysis. However, by viewing their dialogue through Intensity of Interaction, the different tendencies were clear. Nevertheless, they both seemed to focus on the combination of musicianship and musical knowledge. The technical advice by the teacher arose from the musical idea and served the light phrasing by prolonged pulse, whereas the student managed to incorporate the technical advice into his musical flow.

8.2.4 Concrete tools in musical learning

Another violin lesson (L14) provides an example of basic work on instrumental technique, posture, and musical phrasing as well as rhythmic and dynamic elaboration (Tables 8.6a, b). The range of intensity ratings was from 70 to 90 (Figure 8.4). Only a couple of times it fell to 60, and once the student gave 150 (see explanation in Chapter 6). The differences between the figures in modes of communicative activity were rather small: explaining (teacher 22, student 18) and controlling (teacher 19, student 22), while the voices were equal in almost all episodes. However, four episodes had unequal voices and one was a single-voice episode. Consequently, the teacher and student followed the script quite systematically: After one or

sometimes two episodes of explaining, they worked for several episodes by controlling language.

After about 15 minutes of scales and technique they started to work on a *Sonata by Telemann* in episode 16/41. The script broke in episode 29/41, when the teacher emphasized the pulse by taking a tennis ball and bouncing it in tempo. A springy pulse and impulsive sound production had been the topics of their work. Therefore, practicing the bow was central in the beginning of the Sonata. In episodes 21 and 25/41 the teacher started to use the metaphor of the ball. The method of bouncing the ball culminated their process: the musical and pedagogical meaning of the combination of the pulse and the movement became crystallized and clear. Using the ball was not only a metaphor, because the teacher elaborated the method into a physical and kinesthetic understanding. The student also tried to bounce the ball and combine the feeling and preparatory movement to improve elasticity of her bow stroke.

Topic	From the beginning					The ball				
Teacher	xpl/ prf/ mship	ctrl/ ima, tch, rtp, ens/ mship		xpl/ tch, snd, org/ mship	xpl/ rtp, ens, har/ mship+ mcal	ctrl/ rtp, prf/ mship+ mcal	ctrl/ rtp, ima/ mship+ mcal			xpl/ org/ mcal
Student	xpl/ prf/ mship	ctrl/ ima, tch, rtp, ens/ mship		xpl/ tch, snd, org/ mship	ctrl/ rtp, ens, har/ mship+ mcal	ctrl/ rtp, prf/ mship+ mcal	ctrl/ rtp, ima/ mship+ mcal			xpl/ org/ mcal
Episode	24	25	26	27	28	29				25
Duration	28	100	55	94	71	112				30
IR % T				85	70			90		70
IR % St		90	60	80	85	70	80	90		
IR % Obs	80				88			100	85	

Table 8.7a: The pulse and bow technique in violin lesson L14

The slight changes in the intensity ratings of episodes 27, 28, and 29/41 illustrated the need of the teacher to do something different to arouse the student; the teacher wanted the student to thoroughly understand the message about the pulse production with her instrument (Table 8.6a). The teacher, the student, and the observer all rated a rapid rise of intensity in episode 29/41.

The teacher's comments on her ratings were related to the student's mental presence during the lesson.

T: I am present but she is not. If she had been present she would have been much quicker in correcting the intonation. She remained playing the thirds like that (...) she was just in her own world.

However, she did not think it was only bad that she was in her own world sometimes.

T: We have to remember that the lesson needs those calm periods when I am not pushing.

What was the reason for the calm periods?

T: I think it is her habit of playing like that; she goes into her own world. I noticed that she was there, and therefore my intensity is higher than hers. (...) I gave 70% because it was a preparing period (episode 2 and 7/41). Then I took her by the hand. (...) At 6:54 (8/41) I rated 90%. She was present, because we did something concrete and she was able to produce better sound quality.

In her comments on the student's presence, the teacher reflects on how she sensed and experienced their interaction. Although, each teacher and student expressed their understanding for Intensity of Interaction quite differently, the teacher's sensitivity of the student's presence (in lesson L14) articulated what was actually evident by the intensity ratings and comments in most of the lessons examined in this study: The teachers cared for and were aware of their interactive intensity.

For students, however, the focus was often on their participation; how they were able to cope with the obtained information. For example, as discussed previously in Chapter 6, the student (L14) gave 150% (episode 7) and wrote that there was too much at once for her (Figure 8.4).

St: I was thinking about so many things, it was good; the intensity was very high and then came the snap in my brain. I like to work like this. It was rather long period of time (10 min) of intensive working.

The observing student agreed.

Obs: It was easier to follow, in the beginning a little warming up whether start or not to start. Then it was very intensive, short statements and corrections 70–90%.

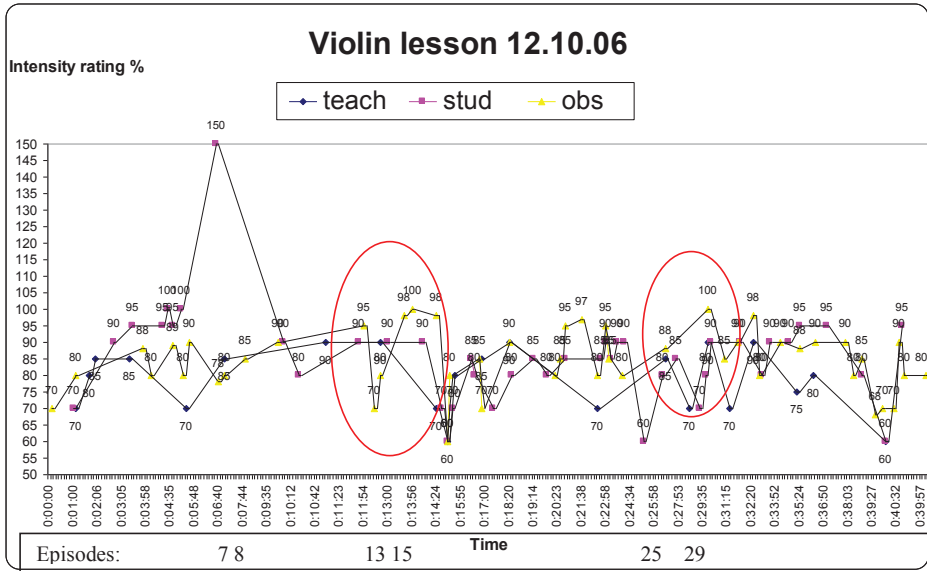


Figure 8.4: Intensity ratings in violin lesson L14

The student really warmed up in ten minutes of playing scales and doing body adjustment on the violin.

St: Ten minutes of lifting my hands felt good, and I got enthusiastic about it. I started to communicate. We had a talking period without the violin starting at 12:00 - (epis.13, 14/41)

Topic	Talking			
Teacher	ctrl/ body, tch/ mship	xpl/ snd/ mship	xpl/ body, emo/ mship+ mcal	ctrl/ body, tch/ mship
Student	ctrl/ body, tch/ mship	xpl/ snd/ mship	xpl/ body, emo/ mship+ mcal	ctrl/ body, tch/ mship
Episode	12	13	14	15
Duration	49	17	40	158
IR % T			90	
IR % St	90		90	70
IR % Obs	95	70	80	98
				100
				98

Table 8.7b: Space through relaxation in violin lesson L14

The teacher had already loosened up after a focused working period, and she thought the intensity was now diminishing.

T: At 14:08 (15/41) I thought it was more like laughing (70%)

The rather long episode 15/41, controlling the student's posture with two preceding episodes of explaining how to play the thirds, is a good example of how the teacher's loosening or relaxing gives space for the student (Table 8.6b). Both the student and the observer thought that the intensity was rising.

Obs: I think the intensity is rising, very detailed working from 12:05 until 13:27 (epis. 13 - 15/41) only talking, and it is more relaxed way of talking. Then 13:32 (the communication) is very intensive.

The student also commented on how she took more space.

St: My comments or talking, the statements are much longer here than before. It is good deliberation I think, from a different perspective, in contrast to the way we worked before. We started to work in a new way. To work without the violin is work but different. It is more about how I felt. I was giving feedback.

These examples demonstrate how the teacher-student interaction enabled change in the student's participation and in her own learning. The same change in student activity could be seen in the vocal lessons. Both lessons showed the same phenomenon, but for different reasons.

8.2.5 Open up and ease off

The heading refers to the teacher's praise, which stands for the general, very positive and supportive atmosphere of one lesson. In this lesson the student first sang all the songs through. Later, they worked in detail on each song. The discussion after general feedback on the performance concerned the order of the songs and their timing. The observer, (student from the voice lesson, L16, of this study), when watching the video, commented that the general atmosphere of the conversation was rather quick-tempered.

Obs: The interaction in the beginning was very impetuous. The teacher is persistent. Both of them speak out their own opinions, therefore they don't really listen to each other. Very much talk; maybe an adult can receive it.

St: We were in a hurry, not really disagreeing or arguing about the music. The fact that the lesson was just before my exam may have caused some excitement. (...)The song is quite hot-tempered.

The student referred to the discussion just after she had sung all the songs. In her opinion, at one point they needed a longer break after a song in order to have enough time for recharging their emotions for the next song. Before going on to the next song, the student

wanted to have emotional contact with the pianist. The teacher did not understand this point. Rather, she was more concerned about the flow of the story, and emphasized the importance of fluent breaks between the pieces.

In the stimulated recall session the teacher and student achieved mutual understanding based on the division of labour; they concluded that pianists and singers have different perspectives on music and performance: The emotional role of a singer must lead the music as a whole.

St: It was good you said it to N (Pianist). It was easier for me anyway.

T: They (the pianists) have a different way of doing; we want to combine songs together so that they form a continuous set or a story.

St: Yes, the singer can't go back into normal life between the songs, she must be present in what she is singing for the whole time on stage. Otherwise the audience will lose its concentration.

During the rest of the lesson, they worked on musical and technical details in each song. When they watched the video, it was obvious that the teacher dominated somewhat at certain points. Nevertheless, the student wanted to express that she was capable of extracting things from the advice, although she still needed help and encouragement to empower her artistry.

T: How did you feel at this stage of the preparation for the exam, one week to go, about our communication? I do say quite straight forward about things. Did you feel that I made the decisions for you?

St: It could be in some places.

T: Yes, in this I am good.

St: We have worked together for quite long time so I think I can choose what I will take from the advice, like the technique and so on. If you have some idea ready about the music or so, it can also lead to that, as my idea is still rather weak, your comments help me crystallize my own ideas, and I do more precisely my own thing.

T: Although I say things rather strictly I don't mean them to be the only ways of doing things.

St: No I don't feel that I am obliged to do only your way.

T: I am very relieved to hear this.

St: It is all about how clearly I make my own thing; that is what you urge for, I think.

During the lesson they also experienced a change in the student activity. They both said that it was different after the student began to indicate exhaustion. In my interpretation this was a sign of a saturation point (Table 8.7). Comments by the student and the teacher strengthened this idea of a kind of turning point.

St: At 46'52'' (39/53) I was tired but not really physically, I just couldn't mentally handle so many thoughts anymore. When I lose my mental concentration, singing gets difficult. The technique is dependent on my mental state. (...) I believe after I said I am tired, I loosened and relaxed. The extra working and pushing vanished from my singing. We were more equal.

When the student actually said “I am tired”, the teacher responded accordingly.

T: Yes, I noticed after she said I am tired. Only then I asked whether you are tired.

Eps	Dur	Teacher	T	IR%Obs	St	Student
39/ 53	9		xpl/ emo, body/ mship	90	xpl/ emo, body/ mship	Mä en jaksa laulaa. [I am too tired to sing!]
		Rupeeeks väsyttään? [Are you tired?]				Joo [Yes.]
		aah, joh. Joo, paljon parempi. [Ah, yes, much better.]				

Table 8.8: “I am tired” in vocal lesson L15

The balance of the interaction changed. The teacher explained in the stimulated recall interview how this international student, coming originally from a Baltic nation, had been used to teacher authority. The student was not supposed to taking initiatives in such a pedagogical atmosphere. She kind of expected the teacher to know everything better, even though the environment was now different and open for her to speak in lessons, unlike in her own home culture.

Before the turning point in episode 39/53, they had worked in detail with another song. This song was, as the student said in the lesson, “difficult” for her (episode 28/53). The student had worked at this point for 39 minutes. During the following seven minutes, she leaned on the piano several times, and stretched occasionally her back, hands, jaw, and legs. Despite these external signs of weariness, the teacher actually went deeper and deeper into the details of vocal technique in order to produce musical expression. The student still kept on singing and responding.

Their work was a construction of a common script, in which explaining and controlling followed each other tightly, with four complete instructional sequences of episodes before the break (Table 8.8a). In episodes from 28 to 36/53 the teacher and student really tried to maximize the performance and develop stronger musical expression. They worked on the bodily feelings of sound production and articulation in the context of the composition and the words. Throughout this sequence of episodes, the object was the combination musicianship + musical, which required an overwhelming effort in order to learn and try out technical and musical improvements together.

Topic	Stoo so umer										Djapa		I am tired	
Teach	xpl/ prf, ens/ mcal	ctrl/ snd, body, tch, ima/ mship+ mcal	xpl/ ima rtp, prf/ mship+ mcal	ctrl/ ima, art mship+ mcal	ctrl/ tch snd, body/ mship+ mcal	xpl/ art, int/ mship+ mcal	xpl/ ima rtp, prf, body/ mship+ mcal	ctrl/ tch snd, body/ mship+ mcal	xpl/ ima rtp/ mship+ mcal	xpl/ prf/ mship	ctrl/ ima, art mship+ mcal	xpl/ emo, body/ mship	xpl/ snc body, art/ mship+ mcal	
Stud	xpl/ prf, ens/ mcal	ctrl/ snd, body, tch, ima/ mship+ mcal	xpl/ ima rtp, prf/ mship+ mcal	ctrl/ ima, art mship+ mcal	ctrl/ tch snd, body, int/ mship+ mcal	xpl/ art, int/ mship+ mcal	xpl/ ima rtp, prf, body/ mship+ mcal	ctrl/ tch snd, body/ mship+ mcal	xpl/ ima rtp/ mship+ mcal	xpl/ prf/ mship	ctrl/ ima, art mship+ mcal	xpl/ emo, body/ mship	xpl/ snc body, art/ mship+ mcal	
Epis	28	29	30	31	32	33	34	35	36	37	38	39	40	
Dur	35	92	32	45	59	47	50	40	21	15	46	9	12	
%T					80				87					
%St				65	60					80				
%Ob		80	90		90			60		97		90		

Table 8.9a: Intensive work in vocal lesson L15

The student decreased to 60% in her intensity rating in episode 31 and 32/53 (see Figure 8.5). She commented in the stimulated recall interview that she felt a little frustration from the teacher's side. Accordingly, the student was not satisfied at the episode 35/53 with her singing, although she appreciated the teacher's encouraging manner of giving instructions.

St: It didn't work better and I didn't feel it was much better. However, she was able to support me even when we went through the problematic places, so that I didn't feel bad. She was able to see also the good things about my performance. She helped me to look at it from wider perspective.

The observer also decreased to 60 in her intensity rating at episode 35/53. However, at episode 37/53 she gave 97. In fact, the ratings in episodes from 36 to 40/53 demonstrate that they all considered the action rather intensive.

Obs: First I put 60%, because when the teacher praised her, their interaction didn't look that intensive, however, the singing was better after all. Then I gave 95%, because they were very close to each other. I had no reason to put less.

When the teacher realized that the student really was tired, she said in the stimulated recall interview that she was ready to change her communicative approach. She said to herself: "talk them (the musical and technical matters of the last songs) through". In other words, she

emphasized that now it was the right time to transfer meanings more by explaining than by controlling.

T: You kind of loosened after having dared to say you were tired. You had the peace to go on. “Now the teacher knows that everything is not in order.” It was deliberating. However, I thought, we still have to go on. In the time available we ought to go through this and this and that in order to prepare for the exam. But considering she was tired, I thought: “let’s take a lower level of working. If they (the songs) don’t work, I’ll just talk them through.” And perhaps I felt ready to see how much we still could manage to accomplish at this lesson. Of course it was quite natural to be tired at that stage, because she had been singing already for 45 minutes. It is a long time to concentrate.

As a result, they had more space in their interaction, and more space for the student’s reactions, musical interpretations and emotions. The teacher no longer pushed as hard and was not as straightforward with her comments. The student said that she could “*believe*” (understand) the teacher better after the turning point than earlier in the lesson.

St: The situation became more relaxed and we went on just the necessary matters.

T: Maybe it is a kind of mental leaning back instead of leaning forward. It is just in order to realize with what energy the other person is ready to go on working.

Despite the fact that after 47 minutes of work the student said she was too tired to sing anymore, they still worked on for about ten more minutes. The change however did not immediately show in the voice analysis, and they seemed to go on with the lesson with the same script, at least for a while. Episodes with explaining on musicianship and musical knowledge were followed by controlling on musicianship + musical episodes 42, 43, 46, and 48/53. Still, according to their comments, the atmosphere was different. In fact, the student took initiatives on three occasions. At this point as an insight, she expressed that everything in music has a direction (43/53). The teacher confirmed this by using the same word.

T: This was good, because I took the word she was using. It is important, because they are the words she uses to teach herself. Her words are more important than those I use. When I teach, I try to use her words consciously. (Stim on episode 43/53)

St: 85%, because I like this kind of interaction. “Direction, everything has direction”. I believe her more here than before, she is somehow softer, not so intense.

The teacher reacted also to the student’s physical way of confirming what she said about the direction.

T: 87% (43/53) this was good and important, because she wanted to express what she felt, even if there is only a gesture by hand, and no words.

The second initiative of the student was in the next episode (44/53), when she vividly illustrated how she would look up and raise her hands for a prayer in the Russian song ‘Gospodi’. This episode was with a rare social language: narrative on musical knowledge (see Table 8.8b). Narrative on musical as a student initiative occurred only a couple of times in this entire study. The third initiative was about articulation in the work ‘Gospodi’. In episode 45, the student suggested singing it without the consonant.

Topic	I am tired!				Direct- ion	Prayer, Gospodi				Next stud			Hop hop			
Teach	xpl em bd ms	xpl/ snd bd, art/ ms + mc	xpl / prf/ ms	ctrl/ ima tch, bd/ ms + mc	ctrl/ ima, ens, rtp/ mc ms	xpl/ art/ mc ms	xpl/ art, ens , tch/ ms	ctrl/ body, art, ens/ mshi p	xpl/ art, tch/ ms + mc	ctrl/ ens, tch, ima, dyn/ ms+ mc	xpl/ tch, bod y, org/ ms	xpl/ dyn, ima/ mc + ms	xpl/ art/ mc + ms	nar/ art, emo , dyn/ mc+ ms	xpl/ org, ima , prf/ mc + ms	
Stud	xpl em bd ms	xpl/ snd , bd, art/ ms + mc	xpl / prf/ ms	ctrl/ ima , tch, bd/ ms + mc	ctrl/ ima, ens, rtp/ mc ms	nar/ ima, bd/ mc	xpl/ art, ens , tch/ ms	ctrl/ body, art, ens/ mshi p	xpl/ art, tch/ ms + mc	ctrl/ ens, tch, ima, dyn/ ms+ mc	xpl/ tch, bod y, org/ ms	xpl/ dyn, ima/ mc + ms	xpl/ art/ mc + ms	xpl/ art, emo , dyn/ mc+ ms	xpl/ org, ima , prf/ mc + ms	
Epis	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	
Dur	9	12	20	27	38	18	38	39	54	28	25	63	32	45	40	
%T					87							95		75		75
%St					85				70					80		
%Ob	90				80							50	80	90	70	

Table 8.9b: Student initiations in vocal lesson L15

The interaction acquired a different kind of intensity after the student’s opening up and the teacher’s loosening up. Rather than actual instruction, the eight final sequences of episodes emphasized the sharing of ideas. The change in their state of mind balanced the interaction, and the intensity ratings confirmed the same conclusion. The student, teacher, and observer all gave rather even intensity ratings in episodes 39 to 44/53. In fact, the ratings by all three met at only these two points for the whole lesson. Figure 8.5 illustrates how the rating curves zigzagged everywhere else in the lesson.

Conclusively, the two narrative double-voice episodes (44 and 52/53) seemed to be significant. First there was the student's initiative, narrating of musical, and then teacher's narrating on musicianship + musical, which arose again after the question by the student. The student commented on the fact that she gave lower ratings: the teacher gave 80 and the student 60. However, quite interestingly, the student's rating curves were always, except in the very end, parallel to the teacher's ratings.

St: (After performing the songs in the beginning) I gave for her part 80%, and for my part 60%.

T: It is quite natural, because the student had just finished her performance and the teacher is only beginning.

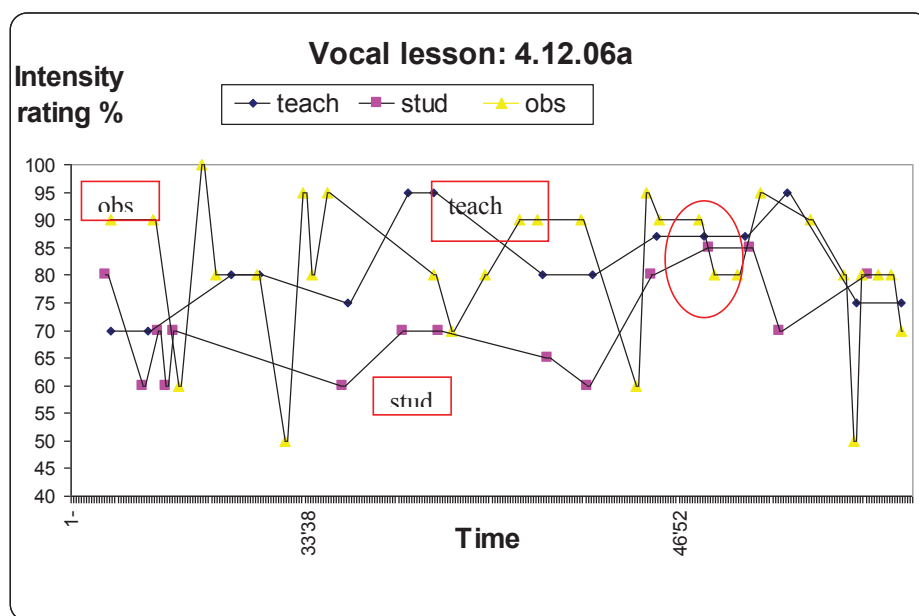


Figure 8.5: Zigzag of intensity ratings in Vocal lesson L15

The gap in the ratings also showed the difference in their activity. As mentioned, their pedagogical attitudes differed, due to cultural differences: The student seemed to expect and wait for teacher authority in the interaction. They all commented on this.

St: I am kind of waiting for the comments, and feedback.

T: The ideal would be that the ideas would come from the student. But she is not that kind of a student. She doesn't express herself in that kind of manner. She is culturally grown up like that.

Obs: The teacher is intensive but the student is not, so it is a kind of curve, nobody can be constantly present. When she (the student) sings she is more present.

To summarize, this lesson was interpreted as a stunning cluster of emotional, musical, and pedagogical expressions. The multilayered form of media was constantly rolling in and out. Both explaining and controlling were confirmed by piano accompaniment, mimics, gesture, eye-contact, aural nuances.

St: She (the teacher) was present all the time. I didn't watch her, but I felt her presence.

T: I communicate a lot nonverbally with a student. I lead by my breathing, and the student can see it from the side of her eyes. In this kind of space (classroom) she can receive my message.

In this case compared to the previous example of the violin lesson (L14), the student commented on the teacher's presence in the lesson. The student felt that the nonverbal and active engagement of the teacher in the student's music making was supportive. The encouraging and active teacher discourse continued in the other voice lesson.

8.2.6 Changing the Object Balance

As mentioned previously in Chapter 7, by altering the object of focus in a lesson, the teacher and student may renew their energy. This musical and pedagogical teaching and learning strategy enabled the teachers and students to sustain high intensity for extended periods of time. In one lesson (voice lesson, L16), for example, most of the markings were close to 90% (Figure 8.6). The percentage went down only for two half-minute breaks. The first was in episodes 21 when the teacher's son called and the second was in episode 27/54. This break was a pause for a drink before moving to the Christmas song. These breaks seemed actually to be of great importance to the student. The observer pointed out the importance of variance in the intensity. The intensity ratings declined only slightly (obs:80%, st:90%) in the third pause in episode 38/54, when the student jumped for relaxation.

Obs: This was an easy case because it is so intensive all the time

She (the teacher) maintained intensity by being present. Her activity also forced the student to be awake. She was supportive, positive, and directed determinedly.

It is good to have some breaks. Nobody can sustain constant high intensity without some breaks. The intensity forms a natural curve.

St: I was thinking about the intensity, maybe I need a break just to recover, because I sometimes cry in the lessons. When I become nervous about myself, I should realize it myself and relax, breathe.

The lesson started by talking about the student's trip to Moscow.

St: It was like chatting in the beginning. (60%)

The intensity seemed to rise as soon as they started to do the warm-ups and vocal exercises (Figure 8.6). Short sentences constructed the interaction in continuous series of replies and comments back and forth.

T: Now this looks smarter (than the previous lesson), there is always an answer (after each sentence.)

St: this is very intensive (90% right after beginning), you must concentrate listening and looking at each other, and do something differently just by looking at small gestures.

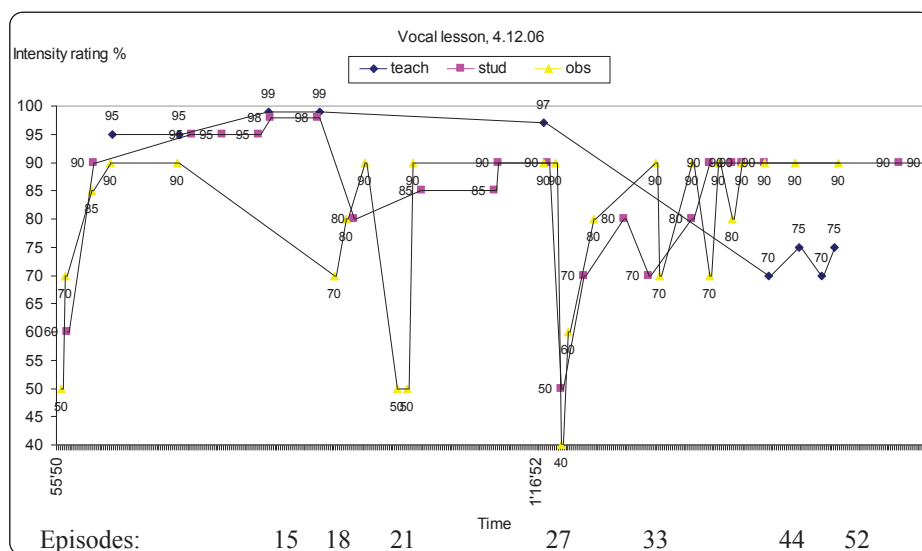


Figure 8.6: Intensity ratings in vocal lesson L16

Everyone gave high intensity ratings, indicating a like-minded perspective. They mentioned several reasons why this focused way of working was so intensive. Firstly, many senses were intensely active. Secondly, the student was active herself, with the help of the teacher, in the search for the right muscles, she reflected openly in two narrative episodes (2 and 5/54) on her emotions and physical feelings. Thirdly, the search and feelings had enough space and time in their interaction. In other words, they were listening to each other and seemed to have the same goal in the search for a relaxed sound production.

T: This is a good session (95%), because the interaction happens on many levels, by eye, by ear, by touching.

Obs: The student searches herself constantly (90%), and the teacher gives hints, but she is supportive and gentle

T: This session is good (99%) because it had good peace, and both of us had movement, or a trip to the same direction, and it was done in a good mood. "Like this, a little bit more..." not too serious, joy or pleasure was the conclusion.

The vocal exercises continued for about 20 minutes. For this first part of the lesson, they worked on sound production techniques, therefore all the episodes were apparently on musicianship, while explaining and controlling episodes took turns one after another (Table 8.9a). Chapter 7 presented the same lesson as an example of change in object balance (see also Table 7.21).

Topic	Relax jaw muscles				Start by slow			Phone	
Teach	xpl/ ima, prf, body, tch, snd/ mship	ctrl/ prfr, tch, body, ens, har, snd, ima/ mship	xpl/ tch, body, ima, prf/ mship	ctrl/ prf, har, tch, body, body/ mship	xpl, tch, ima, body, dyn/ mship	xpl, tch, body, prf, ima/ mship	ctrl/ tch, body, snd, har/ mship	irr	ctrl, tch, body, prf/ mship
Stud	xpl/ ima, prf, body, tch, snd/ mship	ctrl/ prfr, tch, body, ens, har, snd, ima/ mship	xpl/ tch, body, ima, prf/ mship	ctrl/ prf, har, tch, body prf, snd/ mship	xpl, tch, ima, body, dyn/ mship	xpl, tch, body, prf, ima/ mship	ctrl/ tch, body, snd, har/ mship	irr	ctrl, tch, body, prf/ mship
Epis	14	15	16	17	18	19	20	21	22/54
Dur	19	47	15	34	53	46	77	8	65
%T		99			99		97		
%St	95	98			98	80			85
%Ob					70	80	90	50	90

Table 8.10a: Vocal exercises in lesson L16

In the middle of the vocal exercises after 10 minutes of work at episodes 18 and 19/54, the intensity ratings by the observer and the student declined a little.

Obs: She played something wrong on the piano and she was not present for a moment (70%).

St: I gave 80%, because the intensity had declined a little, it had become lighter: she was lecturing: "You shouldn't hold onto your voice." Instead of doing and demonstrating, she rather spoke (explained).

This slight instant of diminishing intensity (see Figure 8.6) consisted of two episodes (18, 19) of explaining and one episode of irrelevant action (phone call). The decline was a break in the

flow of music making; the episodes were deviations in the nonverbally oriented music making script.

“How should I energize this music?”

Because the teacher highly appreciated the student’s activity she thought that the intensity was very high all the time.

T: She was searching. She is special, peculiar person, because she remembers what I mean after I have said it once, and she continues searching by herself: 97% for the whole session.

Epis	Dur	Teacher	T	St	student	Intensity	
33	21	Voiko se olla siis C-duurisointu [Could it be C-major]	xpl, har, ima/ mcal	xpl, har, ima/ mcal		IR%T 97	
					joo on se [Yes, it is.]		
		miten se menee siihen (kokeilee) "haihtuva laulu" ompa jännittävä, voi [How does it go (tries), "fading song", exciting isn't it]					IR%Obs70
		joo, kauhee valo tulee yllättäen sinne loppuun tosta C-duurista [Yes, suddenly terribly shining light comes out of the C-major]				mm, mhmh	
34	25	hyvä, mennääns vielä siis tota, hirveen herkästi, mutta muista että energiaa aina kun sä teet jonkun jonku niinku musiikillisen eleen [Good, let's go from it, terribly sensitive, but remember energy always when you make a musical expression.]	xpl, ima, dyn, prf/ mship+ mcal	xpl, ima, dyn, prf/ mship+ mcal			
		oi joulun aivojen armas riemuntäyteine luoksemme tulos se oli niin ihana se riemuntäyteisyys (mm) siellä. Ja sit älä mee niinku, ei passiivista				mmh	
		[Ah, Christmas, the wonderful glory (mm) there. And, don't go like, not passively.]				niin. Tää on vähä just sellanen että tässä ei oikein tiä miten tätä energisois	
35/54	28	nii, mut jos aattelis et se on .. suuri salaisuus (kuiskaten) [Yes, but if we think.. big secret (whispering.)]	xpl/ dyn, snd, prf/ mcal+ mship	xpl/ dyn, snd, prf/ mcal+ mship		IR%obs 90	
					[Yes, this is a little bit difficult to know how energize this.]		
		semmonen niinku että tätä ei voikaan huutaa kun tää on niin iso juttu [It is like you can not shout it, because it is so big thing.]				mm	
		hiljainen .. Pitää olla hiljaa ja kuunnella niinku salaa, että kuulee kaiken [Quiet... you must be quiet and listen secretly to hear everything.]				niin	
		et silleen, ettei (antaa kehon lysähtää) silleen voi jos [Like that, no to (let's her body collapse) not like that.]				mm	IR%Stu 80
					(naurahtaa) [(Laughs.)]		

Table 8.10b: “How would I energize this?” Vocal lesson L16

The observer and the student reacted with somewhat lower intensity ratings to the part of the video where they had been working for four minutes with the Christmas song (Table 8.9b). This song was new for them both; therefore many details of the music were at an introductory level. In episodes 33 and 34/54, the teacher pointed out “the light of the C-major harmony” in this context. The student was for her part not yet sure how to “energize” the sensitive message and atmosphere of the song.

Topic		jump				anticipate				II verse		
Teach	xpl/ prf, dyn/ mcal+ mship	ctrl/ body/ mship	ctrl/ prf, ens/ mship	xpl, tch, prf/ mship mcal	ctrl/ prf/ mcal+ mship	xpl/ har, int, ima, prf/ mcal+ mship	ctrl/ ens, tch, prf/ mship+ mcal	xpl/ prf, har/ mcal	xpl/ prf/ mship	xpl/ emo/ mcal	ctrl/ tch, snd, ima, prf/ mship	ctrl/ tch, snd, ima/ mship+ mcal
Stud	xpl/ prf, dyn/ mcal+ mship	ctrl, body/ mship	ctrl, prf, ens/ mship	xpl, tch, prf/ mship mcal	ctrl/ prf/ mcal+ mship	xpl/ har, int, ima, prf/ mcal+ mship	ctrl/ ens, tch, prf/ mship+ mcal	xpl/ prf, har/ mcal	xpl/ prf/ mship	xpl/ emo/ mcal	ctrl, prf, ens/ mship+ mcal	ctrl/ tch, snd, ima/ mship+ mcal
Epis	37	38	39	40	41	42	43	44	45	46	47	48
Dur	36	9	50	21	24	34	43	88	3	20	61	21
%T						70		75		70	75	
%St	90	90		90		90						
%Ob	70	90	80	90		90		90				90

Table 8.10c: Shifts of objects in vocal lesson L16

These two episodes (33, 34/54) seemed to start a new kind of interaction in the lesson. However, the action of the episodes focused more on the features of the composition. Therefore, musical knowledge was the object of these episodes. The shift was from explaining and controlling on the students body and singing technique to musical interpretation. In the words of the voice analysis, the shift was from explaining and controlling on musicianship to explaining and controlling on musical. This change of object seemed to relax the student.

After she had been concentrating and working on herself as an instrument for more than 20 minutes, the shift to work with musical problem solving in the context of a composition was clearly relieving. Her intensity ratings were again almost as high as in the beginning of

the lesson. Similarly, the end of the lesson in the observer's appraisal was also intensive (Tables 8.9b and 8.9c). The teacher agreed that the student was given more interpretive space.

St: (90% in episodes 37–42/54) Even though this is a sort of monologue, it is still intensive, because she talks about interpretation and not only about technique.

T: I was maybe leaning back giving her space.

By “monologue,” the student refers to teacher orientation in the interaction. Indeed, the teacher analyzes the song in a mainly verbal way for the student. However, to me it was not a monologue, because the student replied to every comment, although quite briefly, and added questions to the communication. Actually, the student's question about “how to energize” the sensitive beauty of the song, started their musical search. Her question led the teacher to explain in 11 episodes out of the 21 last episodes what to look for, and in 10 episodes to introduce and control how to do it.

The teacher offered three suggestions of how to energize the expression in the song. In episode 35/54 the teacher explains the possibility to sing it out like a big secret; quietly without shouting, because it is so big. Another way, which was introduced in episode 37/54, was to exceed the phrases by breathing. The third way of energizing was to anticipate the change of the harmony.

In the stimulated recall session, the student referred to the idea of how to produce the right kind of sound for a certain musical expression. She said that after all the musician knows how it feels and the realization follows naturally out of that feeling.

St: It is the feeling and emotion of it I guess, you just know how it feels and then you just do it.

In spite of the fact that the teacher had been active and informative all the time, she gave lower intensity ratings for the end of the lesson; her ratings were significantly lower than before (episodes 42 and 44/54 in tables 8.9b and 8.9c).

T: There are even rather good images for the first reading of the song. The rating is 70 – 75%: The interaction is there: I react to what she does, but it could be more student directed. (...) I commented on the fact that I talked more than she answered.

The lower ratings at this time could partly be due to a more critical attitude of assessing oneself. The teacher brought this aspect up at the end of the stimulated-recall process.

T: The more I watched the video, it happened also to me, that I became more and more critical about myself all the time. (Stim: U;Tr;T 1:25)

The description of the communication by the teacher supported her ratings. Her idea of lesson interaction was that she wanted to hear the musical process in the student's singing. Lecturing is only one part of the communication.

T: You don't necessarily repeat with your own words what I have said, but you start processing it. As a teacher I can't really know about your process until I hear the change in the singing, the outcome, and then I can react on what I hear. Only then can I know about our communication whether it was again only in my head or my lecturing.

The student thought that the last episodes were meaningful to her.

St: I don't really talk at all. I only 'mm, mm.', but I do still receive it all and then think what it means in my case. When you said how beautiful the song is, and what things we can find in it, I was just feeling along with you. I didn't have to comment any more about it.

At this point, the teacher defined the ideal lesson from her perspective.

T: At best, a lesson is about that we are around the development of the person and the music. Maybe approaching from different perspectives and with different intensity, but the focus stays in the music and on the student.

Her ideas go along with one of the findings of this study: a central characteristic of the teaching and learning strategies in the instrumental lessons is the alteration of the object of a lesson, in this case the music and the musicianship. At this particular moment of this lesson the change of the object from the student's musicianship to musical knowledge of the composition gave the student space and, therefore, the possibility to be more active or participate more intensively.

When I explained the analysis above to them in the stimulated recall interview, they started to discuss the student autonomy and the teacher's role in the artistic process.

T: I think I was offering a state of emotion here for her. How did you feel about it, was it too much pointing out? I feel that I am offering choices.

St: I get too often stuck to some technical problems, but when you offered a state of emotion it was easy to grasp on it. Later it may change into what I feel. I didn't really feel it was too intrusive.

T: It is very sensitive. Maybe it is not such a big question in a new song. For an old piece of music, however, that has already been analysed, it might feel intrusive.

St: Also in an old piece, it is only healthy to think about it from a new standpoint; do I really think in this way? It doesn't really make any harm.

St: The decision is made by me anyway.

T: I am so proud of you.

In their discussion, after watching the video, the teacher was relieved, because her active role in the lessons, according to the students, did not block the student autonomy. She felt free to take or leave the new perspectives of approaching music and singing that the teacher offered.

8.2.7 Merging musically

The framework for interaction in the flute lesson was somewhat different from the other lesson in this study, because the students worked as a pair with the teacher. As described in Chapter 6, the teacher had chosen these two students (StN and StJ),³⁴ because she thought they could support and stimulate each other in their learning.

T: I think two students is a rather good way of doing it. If there were more players it would be more difficult, because some scattering factors could come along. (...) We have done it a couple of times, and I have noticed that both are more concentrated and active. Also the students get support and at the same time inspiration from the sound of the other to their playing. I felt it was more fruitful and more intensive compared to if I were with one student alone.

The musical theme was to study and practice orchestra solos for flute. The compositions were the *Fourth symphony by Brahms*, excerpts from *Carmen opera by Bizét*, *Wilhelm Tell by Rossini*, the *Afternoon of a Faun by Debussy*, and the *Scherzo by Dvorak*.

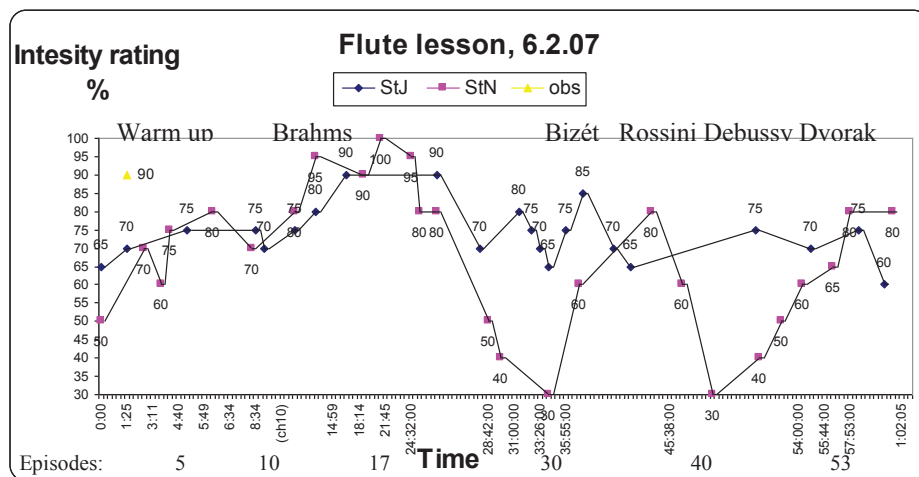


Figure 8.7: Intensity ratings in flute lesson L17

³⁴ The abbreviations StN and StJ refer correspondingly to the female and male student in the flute lesson.

For the first ten minutes, they worked with warming-up exercises. For the next 25 minutes, they worked on Brahms, then five minutes on the Carmen, seven minutes on Wilhelm Tell, one minute on Debussy and one minute on Dvorak. The composers are marked in the excerpts to illustrate the construction of the lesson.

The average of the intensity ratings by the students was 73,3% for StJ and 67,31% for StN and 70,1% together. The variance of the ratings is almost the same between the two except ratings of 30% by StN for two times. For the first drop of her rating in episode 29/60, the student said she had totally lost her concentration (Figure 8.7). The second time in episode 39/60, she did ten up and down knee bends to revive her energy. The teacher agreed with the students' ratings, which for the first 18 minutes were equal with the second student (StN). The teacher, however, felt reluctant to write down more ratings. She said she was so critical about herself, and for her the students' ratings would be informative enough. The observer (the vocal teacher in the lessons L15 and L16) thought that the whole lesson was constantly highly intensive (90%). The high intensity was in her opinion due to the warming up session, in which they worked without written music. They worked by sound experiments and improvisational playing in turns, which aimed at, according to the teacher, stimulating and activating senses of the students.

Obs: It was totally intensive. Everybody had their ears open all the time. You played listening without the dominating written music; by the ear not so much with the eye. They also spurred each other.

T: I try to get over the written music, when we search for the inner feeling and ear.

First, the teacher announced that they would be playing the flute solo from the fourth symphony by Brahms, which they actually started 10 episodes and also 10 minutes later. The episodes 2 to 9/60 were sound experiments (Table 8.10): “This is our diving sound” (...) “as you fill yourselves up with the sound, you dive into the sound, and the whole room will be full of the sound”

epis	dur	teacher	t	st	StJ	StN
2/60	50	soittaa - - tää on tää meidän sukellusääni (naurahtaa) [Plays – this is our diving tone (laughs).]	xpl/ ima, snd/ msh p	ctrl/ ima, snd/ msh p	soittaa	[Plays.] soittaa
		soittaa - samalla kun täytätte itsenne sillä äänellä niin samalla sukellatte sen äänen sisään ja koko huone täyttyy sillä				
		[Plays – at the same time you fill yourself with that tone, you dive into the sound and the whole room inflates with it.]			soittaa	soittaa

Table 8.11: “Diving sound” in flute lesson L17

The students played taking turns after each other, and communicating with variations of sound in different octaves, and filling the octaves with scales: “Give speed to the airflow”, “make a church-bell effect with diminuendo by flinging the sound”, “sit on the sound”, “and give the energy of the vibrato there”. They all felt these exercises were important in preparing for the coming solo of the Brahms symphony.

T: These exercises are warming or speeding up exercises. We did them for Brahms, where you should have sensitivity; the high pianissimo in it is quite difficult. But if the speed is not there, the sound becomes too careful or tense.

StN: I think the warming up was important, because it is easier to get the feeling for the music. Like in the orchestra you get the feeling from there already, which is not possible right away when you play alone.

Another aspect of the warm-ups was intonation.

T: This exercise provides the student with the same kind of intonation and sound at the same time. The tuning doesn't guarantee the intonation. In orchestra when the players have the same kind of sound it makes the intonation much easier. And with another player it is very difficult.

The warm-up (episodes 2 to 9/60) consisted of episodes with explaining and controlling of musicianship (Table 8.11a). In these episodes, they worked on sound production by using images, harmony, ensemble playing and dynamics. Actually, the principal method in this lesson was to let the students elaborate their musical interpretation in correspondence with each other, and in the spirit of improvisation. The teacher directed with short sentences and by her own playing, singing and gestures. As a result, the students played all the time, and said hardly anything for half an hour.

Obs (vocal teacher in lessons L15, L16): You speak very little. I experience singing lessons more like a conversation. Of course we use words anyway in our phrasing. This is still a conversation without words.

T: In private lesson we sometimes need more explaining.

The observer pointed out that the interaction was more intensive among the students than between the students and the teacher. The students' work was similar with the good moments in chamber music, and seemed to resemble Eisenberg's notion of “jamming” (see Chapter 2).

Obs: The intensity of their interaction (between the students) was stronger (in episode 10) and after than it was between you and the students.

T: It was actually the meaning; they kind of taught each other.

Topic		dive				bell				energy				Brahms	
Teach	xpl, prf, org/ mcl	xpl/ ima, snd/ msh	ctrl/ snd/ msh	xpl/ ens, har, snd/ msh	ctrl, ima, dyn, snd/ msh		xpl/ har, dyn, ima/ mc+ msh	xpl/ snd, prf/ msh	ctrl/ dyn, prf, ima/ msh	ctrl/ ens, dyn, prf/ msh		xpl/ org, prf/ msh	xpl/ rtp, ima, ens/ mc+ msh		
Stud	xpl, prf, org/ mcl	ctrl/ ima, snd/ msh	ctrl/ snd/ msh	ctrl/ snd/ msh	ctrl, ima, dyn, snd/ msh		ctrl, snd/ mc+ msh	ctrl/ snd, prf/ msh	ctrl/ dyn, prf, ima/ msh	ctrl/ ens, dyn, prf/ msh		xpl/ org/ msh	xpl/ rtp, ima, ens/ mc+ msh		
Epis	1	2	3	4	5		6	7	8	9		10	11		
Dur	35	50	57	49	139		40	35	69	114		24	44		
IR%StJ	65		70				75			75	70		75		
IR%StN	50			70	60	75		80		70			80		

Table 8.12a: Musical communication in Flute lesson L17

Obs: When you asked the boy to play differently from the way the other student had played, was it to improve the other's playing or what?

T: Yes, actually the meaning was to activate him by asking, what he would like to add to the performance from his part. They could do it, because they didn't have any competition. Both wanted to do more crescendo in the escalating section. Also the beginning could have been done differently. But it is more a sensitive kind of place so it needed maybe a more fragile type of phrasing.

Obs: Maybe it was also in the language. If you say what more would you put in this, they instantly think of crescendo.

They expressed themselves with the instruments in musical communication: "Give the energy of the vibrato there and offer it to him" (episodes 8 and 9/60). I asked the teacher, what she meant by energy. Is it about dynamics, personality or what?

T: Energy is the speed of the airflow, which makes the sound production easier:

Relax spiritually and use your body as a whole. This is important particularly to wind instruments, because like if we don't have it (the speed in the air flow) in pianissimo it loses the tension and it is not interesting any more. Isn't it the same for cello?

They continued with the same kind of musical praxis in Brahms (Table 8.11b). Because the teacher thought the flute solo had possibilities for duet-playing, they applied two roles, a metaphor of Apollo and Dionysus, to characterize their musical expression (episodes 13 to 15/60).

T: The image of the Apollo and Dionysus³⁵ came spontaneously. In Brahms there is a crescendo in the other (part) and in the other there is no nuance.

Topic	Brahms			Apollo Dionysus				Orchestra			
Teach	xpl/ org, prf/ ms	xpl/ rtp, ima, ens/ mc+ ms	ctrl, ens, prf/ ms	xpl/ ima, ens, org/ mc+ ms	ctrl/ prf, ens, ima, org/ ms	ctrl/ prf, ima, rtp, har, int/ mc+ ms	xpl/ dyn, prf, org/ mc+ ms	xpl/ prf, dyn/ mc+ ms	nar/ prf, dyn/ mrc	ctrl/ prf, ima, dyn/ ms mc	ctrl/ prf, dyn, ens/ mc+ ms
Stud	xpl/ org/ ms	xpl/ rtp, ima, ens/ mc+ msh	ctrl, ens, prf/ msh	ctrl/ ima, ens, org/ mc+ msh	ctrl/ prf, ens, ima, org/ msh	ctrl/ prf, ima, har, int/ mc+ ms	ctrl/ dyn, prf, org/ mc+ ms	ctrl/ prf, dyn/ mc+ ms	nar/ prf, dyn/ mrc	ctrl/ prf, ima, dyn/ ms mc	ctrl/ prf, dyn, ens/ mc+ ms
Epis	10	11	12	13	14	15	16	17	18	19	20
Dur	24	44	81	135	99	125	170	82	99	59	44
IR%StJ		75		80		90					
IR%StN		80		95			90	100		95	80

Table 8.12b: Apollo and Dionysus in Flute lesson LI7

In episode15/60, they changed the roles trying to get more of Dionysus out: “clear the rhythm, more crescendo”. After all the preparation, with warm-ups, images and sound experiments, the teacher described the situation for them. She added a new context for their musical expression: “This is beautiful and wonderful. But now you play in a big hall with full effort inside a big orchestra. It doesn’t matter if it is not so terribly clean”. In the narrating of musical re-contextualization episode the teacher encouraged the students to dive into the music.

T: (...) yes I wanted to make him free, and when the freedom is there, the muscles work better and the control comes by itself.

On the other hand, the teacher pointed out the need for a balance between energy and control.

T: In this place it becomes clear that between energy and control there must be a balance. The balance is lost if there is too much energy and too little control. You have to hold here (stomach). If it is not there it is up in the throat and the sound gets stuck. In that case you will have the vibrato in your throat and it becomes like a sheep muzzle.

³⁵ Apollo: the ancient Greek and Roman god of light, healing, music, poetry, prophecy, and manly beauty; the son of Leto and brother of Artemis, a very handsome young man.
Dionysus: The god of wine and of an orgiastic religion celebrating the power and fertility of nature. Also called *Bacchus*.

She also emphasized the need to be patient when working to achieve high standards of sound production.

T: My singing teacher said an interesting thing. If you immediately try to produce beautiful sound you might do something compensatory to get fast results. If you patiently try to do it right, muscles will find little by little the way to do it. If you start to correct the way you do based on the sound, it is too late. In order to maintain freedom you have to give time to different movements and actions so that they are able to grow and mature.

The object of this lesson had changed from musicianship to musical material. The warm up sequences within episodes 2 – 9/60 prepared for the Brahms (10 – 23/60). The combination of musicianship and musical in episodes 6, 11, 13 and on from episode 15/60 illustrate the gradual increase of the reference to the music in their work.

The intensity ratings were at the highest in episodes 15 – 19 for the whole lesson (see Figure 8.7). After 30 minutes of working (episode 24/60), both the teacher and the students experienced a clear breaking point.

T: When after 30 minutes of work, we took a section that didn't work very well, the reaction was like: "Help it doesn't work!"

Obs. After 30 minutes there seems to be some kind of a breaking point. [At this kind of moments] we ought to lean back for a while. I noticed that it [the method of a duet in the warming up] worked beautifully.

After that, the intensity ratings radically declined. The teacher referred to an intonation problem: when the students played a high C together, and their attempt was unsuccessful, the tone was like "a cluster of bees" (24/60).

St:N Yes we talked about it that we couldn't concentrate anymore so well here in the unison place

T: When you played it at 20'00'' (episode 16/60) your playing was getting better. Maybe the unison was a kind of shock.

The teacher used the opportunity to compare unison flute with unison violin. The tuning of each flute may sound different when you play such high notes. The instruments are just slightly different.

T: A violin section has a kind of broader lane for the sound. In orchestra you have to learn to live with the relative truth of the intonation

StJ: When you play unison in a group, you get experienced in playing in tune.

T: The other side of the group unison is that the personal color may not develop; both are important.

In the discussion on the change after about 25 minutes of work they pointed out several reasons for the decline in the intensity ratings. One reason was physical and mental fatigue at that moment. The students suddenly realized the amount of unfinished work that remained (which may be compared, for example, with the critical attitude of students in lessons 1–8 and the teacher in lessons 9–11). In a sense, they awoke from a musical dream and came back to the concrete world.

T: The place when we started to play in unison and the intonation wasn't there and you had done so much before that, I think it was a kind of a collapse.

Suddenly it was clear that so much still needed to be done although you played so well earlier.

StN: Maybe it was physically tiring.

T: Sometimes when you are enthusiastic about something you find that you are not tired.

StN: When you face the reality or a problem you realize that you have played a lot already.

T: Maybe we should have moved to Carmen.

They also talked about not letting negative feelings dominate the musical performance, and indicated that the musical insight and vision needs to be on the top of musicians' minds.

StJ: I couldn't concentrate on the music

T: I think you were too much bound to how you feel yourself. If you realize and have insight to the music when you practice or perform, you will get over your physical or emotional experiences and you can get to the music. The musical perspective of insight will come through even though you have a bad feeling yourself.

Later, after the other student had done her gymnastics (episode 39/60) they continued to discuss the topic of being fit when playing.

T: Yes, if you don't have oxygen and you see stars, your fingers won't work. It is important that you are physically well when you play.

Mentally it is also important to have oxygen in the brain, otherwise you lose contact with the fingers and you are not guiding them anymore.

The time seemed to pass quickly during the first 29 episodes (33 minutes from the beginning.

T: At first, when I watched (the video), I was surprised by how long we worked on the Brahms, because I didn't have the feeling that we did the same thing for such a long time.

Participants in the other lessons commented also on their experiences and on how they experienced time during the lessons. Sensing time seems to be related to Intensity of Interaction. However, this matter lies outside the scope of this study.³⁶

8.2.8 Assembling and Dismantling Sequences

The words “assembling” and “dismantling” here refer to the process of optimizing the balance of challenges and skills so they either build up their ability along with a more complex challenge or tear the elements of the task into manageable pieces. The group lessons for cello offered beautiful examples of assembling and dismantling episodes, because everything was quite new to the boys. They needed to build up the ensemble along with the instrumental technique and musical expression. The task to hold on to four and five year old boys learning complex skills together was without doubt challenging. The teacher commented that she was sorry for the fact that cellists need to sit down, and the room was also so small that they had little possibility to move around. She would use movements whenever possible.

The five group lessons were highly intensive. The energy and tempo of the interaction was evident to all observers. Two observers gave intensity ratings for these lessons, but they gave scores of 90 or 80 percent to the lessons all the time, so the ratings did not articulate the episodes nor the sequences of episodes. Therefore, their ratings are not included in the charts (see Chapter 6). It seemed rather difficult, even for experts, to jump into fast and rapidly changing interaction between a fast teacher and *veloce* and lively young students with only one observation. Neither the observers nor parents could follow the details of the musical and pedagogical interaction. However, their overall ratings and comments supported each other, as did my view of the lesson interaction mode. The average ratings of the observers were around 90%.

The teacher gave quite detailed ratings (Figure 8.8). Her impression of the lesson communication and activity seemed to be based on student attentiveness or presence in the lesson. The parents’ activity also sometimes stimulated her reactions. She assessed her own actions sharply and realistically. In the following section, I give examples that particularly add to the analysis of sequences of episodes.

³⁶ The research setting currently does not allow further conclusions on this topic. I did not systematically collect data on how the participants experienced time during the lessons. Therefore, the comments of the participants in this study emphasize the need to explore this matter more in future.

The interaction among the group was quite in balance so that each boy was emotionally and actively present. The teacher described the activity as follows:

T: They actually teach each other. One is slower than another. When they are together the slower ones swim along and learn also from others.

The teacher seemed quite aware of the different personalities of the boys, yet it was no problem to her.

T: When I think about the group, they are so different, but in the situation I don't think about or notice the differences. The differences don't matter; they have started to find equality, simultaneous playing. They search for a common pulse, which isn't necessarily same to all. The whole spring was adjusting together to each other. One boy wants to play faster and the other slower. But still they can already play together.

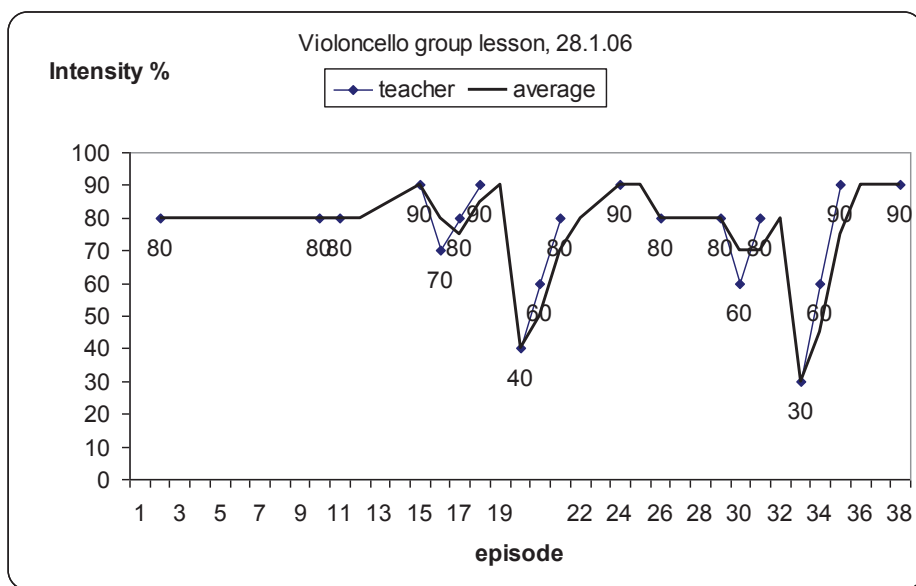


Figure 8.8: Intensity ratings in violoncello group lesson L18

We talked about the rating principles. Her idea was clearly not to push or control too much. She wanted space and variation in the interaction.

T: If the boys would do exactly as I say they would be robots.

She wanted to be present for all the boys, together and for each of them separately. Therefore, the others had to wait sometimes, while she worked with one boy at a time. These moments took place at every lesson.

T: Maybe I am not even looking for 100% interaction. The ideal would be that I notice almost every boy, and each of them get attention.

They practiced how to start and end their playing together, which is obviously one of the most important qualities of any orchestra or chamber music group. They performed the exercise in two concrete games. First, the teacher hid herself behind the cello to implicate silence. The playing could start, when she turned back toward the front (episodes 15 and 16).

T: Going behind the cello made them listen. It was not good for playing but good for listening.

The other innovation was to use illustrated traffic lights (colored pieces of paper in episodes 17 and 18/38). Red was for stopping, green for playing. Again the boys understood the meaning immediately, which also seemed to work as they played according to the traffic lights (Table 8.12a). In the next two episodes, the teacher replaced herself with a rabbit, who was supposed to control the legs, backs, cello bows and so on while she played the piano. At this point the teacher gave a rating of 40%. Maybe there was just too much information for that moment. The teacher's point was to make the boys listen by withdrawing from the visual front and turning her back to them at the piano.

L18	Rules of ensemble		Rules		Position		
Topic	Behind cello		Traffic lights		Rabbit		
Teach	ctrl/ body, ens/ mship	xpl/ ens, ima/ mship	ctrl/ ima, ens/ mship	ctrl/ rtp, ens, tch, body/ mship	nar/ ima, tch, body/ mship	ctrl/ ens, prf, body/ mship	
Stud	ctrl/ body, ens/ mship	xpl/ ens, ima/ mship	ctrl/ ima, ens/ mship	ctrl/ rtp, ens, tch, body/ mship	ctrl/ ima, tch, body/ mship	ctrl/ ens, prf, body/ mship	
Epis	15/38	16	17	18	19	20	
Dur	57	24	45	58	34	75	
IR% T	90	70	80	90		40	60

Table 8.13a: Innovations in violoncello group lesson L18

The teacher returned fast to the theme by bouncing a tennis ball. In episode 21/38 she introduced the play by the combination of clapping hands and bouncing the ball (Table 8.12b). In episode 23/38 she said that they would now sing and clap together. This worked

beautifully. Even when she lost the control of the ball (episode 24/38) the boys continued their clapping and singing in the same tempo to the end of the song.

L18	Same tempo		Keeping the pulse									
Topic	Ball	Sing+clap		Star	Play+clap one by one							
Teach	xpl/ tch/ mship	ctrl/ rtp, ens, ima/ mship	xpl/ body, rtp, ens/ mcal	ctrl/ rtp, ens, ima/ mship+ mcal	ctrl/ rtp, ens/ mship	xpl/ rtp, ens/ mship	ctrl/ rtp, ens, prf/ mship	ctrl/ rtp, ens, tch, prf/ mship	ctrl/ rtp, ens, tch, prf/ mship	ctrl/ rtp, ens, tch, prf/ mship	ctrl/ rtp, ens, tch, prf/ mship	ctrl/ rtp, ens, tch, prf/ mship
Stud	ctrl/ tch/ mship	ctrl/ rtp, ens, ima/ mship	ctrl/ body, rtp, ens/ mcal	nar/ rtp, ens, ima/ mship+ mcal	ctrl/ rtp, ens/ mship	ctrl/ rtp, ens/ mship	ctrl/ rtp, ens, prf/ mship	ctrl/ rtp, ens, tch, prf/ mship	ctrl/ rtp, ens, tch, prf/ mship	ctrl/ rtp, ens, tch, prf/ mship	ctrl/ rtp, ens, tch, prf/ mship	ctrl/ rtp, ens, tch, prf/ mship
Epis	21	22	23	24	25	26	27	28	29	30	31	32
Dur	40	22	5	47	19	16	16	13	14	36	24	15
IR% T	80			90		80			80	60	80	

Table 8.13b: Ball pouncing L18

T: The children continued, we reached the goal, the pulse stayed and continued together. Song has to be a whole. A small part of a song will not satisfy. They need to sing as a whole. That's why they tend to always practice the whole piece of music. You cannot stop it without doing something foolish.

After they had played together, she knelt in front of each boy for a short exercise with her clapping and his playing. She felt it was important to give attention to each boy separately at least for a short time in the group lessons. They were so different after all, and she wanted to give them a chance to express music or choose a tempo according to their individual personalities.

T: Some boys are fast some slow.

The other boys sat on their places quietly and without much turning around. The teacher gave intensity ratings of 80 and 60 for the episodes 25–32/38.

At the end of the lesson, they improvised a haunted house (Table 8.12c). She played *the song of the Old Castle* while the boys made the characteristic creaking, knocking, sliding and other mortifying sounds. *The Cuckoo song* in episode 33/38 before the Old castle was, in the teacher's opinion, a little out of place. She just remembered that they ought to have it in the lesson. That is why she gave 30% for that moment.

T: We jumped directly to the [Cuckoo] song. It [the song] was in the wrong place before the ghost song.

It took time and extra energy for the teacher to explain and the students to prepare the third finger for some of the boys (episode 33 in Figure 8.12c). After all, the Cuckoo song and the introductory story by the teacher (narrative in episode 35/38) prepared the boys for the episode of re-contextualization (36/38).

L18		Improvisation				
Topic	Cuckoo	Old castle				
Teach	xpl/ prf, ima/ mship+ mcal	ctrl/ tch, ima/ mship	nar/ snd, ima, dyn/ mcal	nar/ ima, ens, dyn/ mrc	xpl/ emo/ mship	ctrl/ org/ mship
Stud	ctrl/ prf, ima/ mship+ mcal	ctrl/ tch, ima/ mship	nar/ snd, ima, dyn/ mcal	nar/ ima, ens, dyn/ mrc	xpl/ emo/ mship	ctrl/ org/ mship
Epis	33	34	35	36	37	38
Dur	44	50	43	73	4	4
IR% T	30	60	90			90

Table 8.13c: Old Castle violoncello group, L18

After all, the whole lesson had made them ready for this moment. All the exercises for playing together as an ensemble in same tempo, stopping and starting together, learning the common rules and so on, seemed to have prepared them for this improvisation. The knockings and other effects were familiar: they knew how to produce all the possible effects. “Knock only on the black wood!” The teacher could free herself to play the theme while the boys created the haunted sound collage. She commented on the way she introduced *the song of the Old Castle*.

T: I got contact [with the boys] by speaking silently.

She thought the parents needed to put more trust in the situation, the music and the boys.

T: One parent was controlling in vain, I had given them permission to improvise.
This is their haunted house; they were totally along with the story.
The parents may have thought that the house should be more silent or so.
I think this worked but maybe the parents didn't think so.

The meaning of a dismantling is to descend from complex to a more simple challenge (Table 8.13). An example of dismantling sequence was at the end of lesson 21 (L21, 1.4.06).

In this sequence of episodes, they were playing a French song (28/42). After 30 seconds of playing the teacher stopped and said her fingers were so tired that they had to play without the left hand (30). Then she immediately stopped again and asked the boys to give her a break and to play only the rhythm of the song on the A-string. Again she stopped, asking them to also leave the bow (31). They played a different song with pizzicato, adding singing and different animal sounds to it for the second time (32-35/42).

Topic	French song		Rest	Bow away	Snail shopping		Pp	
Teach	xpl/ prf/ mcal	ctrl/ ima, body, tch/ mship	nar/ ima, tch, body, rtp/ mship	ctrl/ tch, ens/ mcal+ mship	xpl/ ima, ens, prf/ mcal	ctrl/ ens/ mship+ mcal	nar/ ima, ens, dyn/ mcal+ mship	xpl/ har/ mcal
Stud	xpl/ prf/ mcal	ctrl/ ima, body, tch/ mship	ctrl/ ima, tch, body, rtp/ mship	ctrl/ tch, ens/ mcal+ mship	xpl/ ima, ens, prf/ mcal	ctrl/ ens/ mship+ mcal	nar/ ima, ens, dyn/ mcal+ mship	ctrl/ har, ens/ mship+ mcal
Epis	28	29	30	31	32	33	34	35
Dur	28	43	39	10	19	15	51	30
IR% T		30	50	60		70		

Table 8.14: Dismantling sequence, L21

By making the playing easier, the teacher could restore contact with the boys. The French song did not seem to work for all of them and then she immediately turned around.

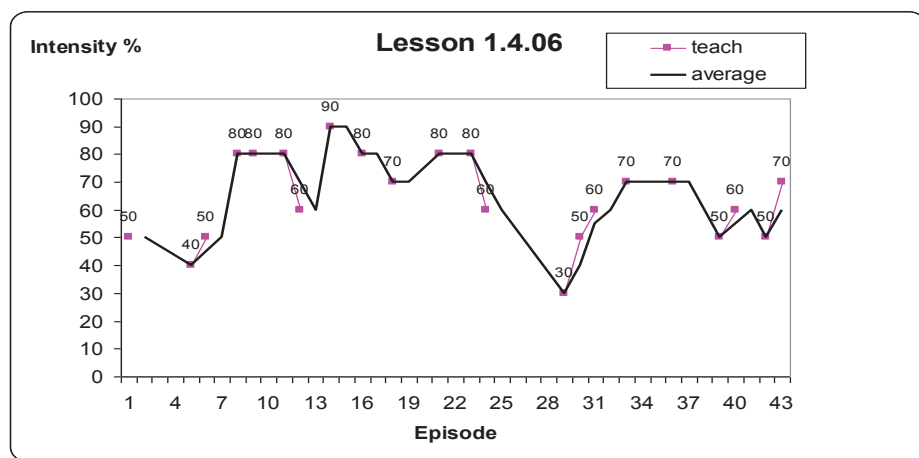


Figure 8.9: Intensity ratings in cello group lesson L21

The teacher commented on how she purposely tore down the challenge by leaving out notes, the bow, string crossings and other elements.

T: The interaction gets better when we have easier things to do. Earlier it was too difficult, too many things that caused a scattering effect. I started to split the job down into easier and smaller tasks: When the French song didn't work we played with pizzicato. I dismantled the job down to the level at which we could again work together as a group.

Dismantling seemed to be one of the basic rules for her.

T: It is important to return, to call off or back up the intension, which seems to be going to the wrong direction. Otherwise you hit your head against the wall.

The intensity ratings followed her idea of getting back to the interaction by dismantling the complexity of the task (Figure 8.9).

Lesson 22 (cello group lesson) offers an example of assembling sequences. These sequences consisted of preparation through using dolls as symbols for different parts of body and cello technique. The teacher had placed Matryoska dolls in front of the cello players, who were sitting in a half circle. To remind the boys of the elements of good position and playing technique, the teacher pointed at each Matryoska doll. The boys responded by answering and correcting their positions immediately.

The ratings in Figure 8.10 illustrate a long assembling sequence from episode 1 to 16, with four preparing sections first from episodes 1 to 3, second from 4 to 9, third from 10 to 13, and fourth from 14 to 16. These sections constructed one theme: The preparation for playing, remembering the key points of the playing position. The preparation process culminated in episode 16, when the teacher described the context of the coming concert. This episode of musical re-contextualization had a special quiet feeling of mutual understanding of what was needed when mentally preparing for the coming concert.

T: I told them about the coming concert. I have noticed that children listen better to something important, if I say it quietly. In that sense I think I succeeded quite well, because they were absolutely quiet and listened with outmost deep thoughts: "What a nice and exciting thing is going to happen!"

The approximately nine minute long sequence (episodes 1–16) included basic information about cello playing, which they had learned during the whole winter season. Now they repeated these short, fast and important facts on playing technique along with image reminders. Six different Matryoska dolls represented the legs, the back, or the bow grip, and so on. They repeated over and over again adding each time a new doll with a meaning concerning cello playing.

They played different songs in the sequence (1–16), but the preparation was always the same using the reminder dolls. The logic of the sequence was clear; however, the variations in the ratings show how the interaction seemed to have rapid changes in the sequence. For the beginning the teacher gave 90% and 80% (episodes 1 and 2) and 60% when they started to play.

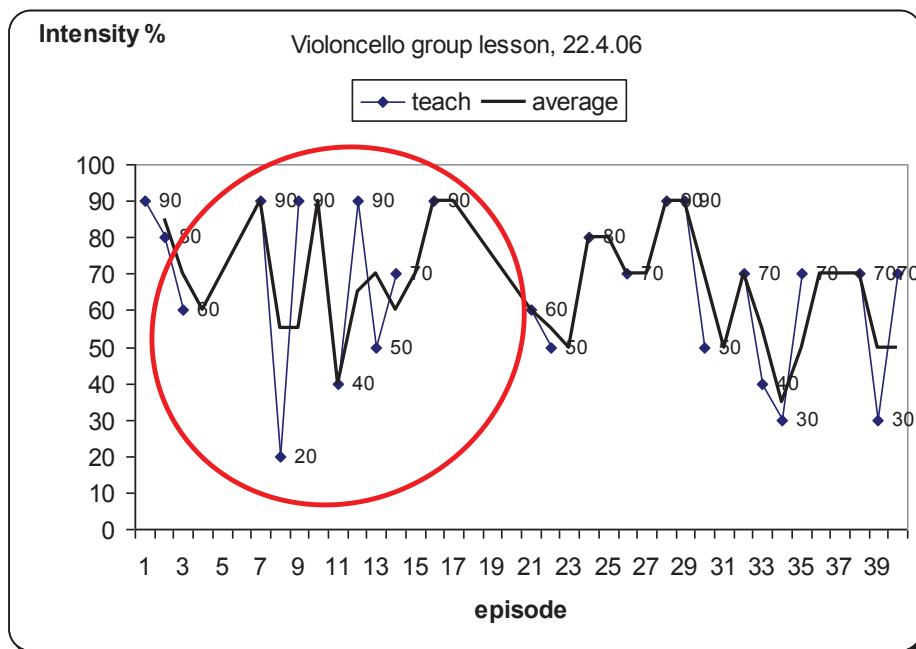


Figure 8.10: Intensity ratings in cello group lesson L22

T: For playing 60%, because they could fairly well follow what happened, and what they heard from the front and in the sides.

They repeated the preparation by the Matryoska dolls again in episodes 4 to 6. In episode 5, the teacher introduced the next song (Pii Paa Fire Truck), which they briefly started to play (episode 7). The teacher interrupted their playing, because the parents, in her opinion, disturbed the interaction between the boys and herself by worrying about some misbehavior.

T: 90% because they were fantastic. I cut the playing, because of the parents, not because of the children. The parents' worrying to keep the children in order really disturbed me. We would have soon returned to it and tried it again. I don't know how to put it. Maybe I give 20%,

because the parents disturbed the communication between me and the children. One boy knew how to play the intermediate part of the song, and he wanted to play it. The way he did it didn't matter. We would have taken the next time differently.

I asked her if she felt resentment because of the disturbance of the parents and sympathy for the children, and she commented:

T: Yes, if someone feels capable of doing something, we should let him do it and not turn him down, even though he played at a wrong time.

Of course the parents reacted based on our rules, even though I had directed the orders to the children. The teacher agreed that she had to deal with two kinds of groups, the boys' and the parents' group.

T: Yes, sometimes the parents are too active and project their potential activity through the children.

The teacher thought that she did not sufficiently anticipate the task ahead in episode 11, therefore she gave 40%.

T: (...). It didn't go through, because I said it while we were playing and not before, therefore they didn't react to it, 40%.

To make sure what she meant, I asked her opinion about anticipation (see Section 2.2.3).

R: So, anticipation is important?

T: Yes, so that children know how to react. I need to be clear in what I say. The fact that there was playing on top of each other was more my fault than theirs. The two who played more are kind of in their own world. They are not actively present in the group paying attention to other children. They had only listened to the earlier tempo.

Much like an answer to our discussion, anticipation seemed to work in the next narrative episode, in which the teacher pretended she had forgotten the meanings of the Matryoska dolls. The boys shouted back all the meanings of the four dolls they had gone through, then she introduced the fifth doll. For intensity she gave 90%.

T: They were very active here.

They could do it together: "The fourth finger exercise is working!" They could prepare their [left] hand and play fairly clean notes of Western scale.

In episode 13, the teacher gave 50%, because she thought the preparation took too much time (58 seconds), and the boys showed signs of absent-mindedness. For the record they had

worked at this point about seven minutes and did the preparation now for the seventh time. However, the absent-mindedness she noticed was not very long, because when they started to play each boy was present again.

I call this an assembling sequence, because they were bringing pieces of information, skills, know-how on cello playing and ensemble work together. The Matryoska dolls loaded with technical reminders represent one important and concrete level of information. They worked on other levels too: they combined musical and technical elements by the dolls; they combined the ensemble work with listening to the teacher and to each other.

The added challenge with more and more dolls was getting more complex each time in the assembling sequence facilitating, in my interpretation, a “flow” experience (see Table 8.14). This interpretation was based on Custodero’s (2002b) definition on flow experiences, which emphasizes the increasing complexity along with anticipation, expansion, and extension within the musical engagement (see Section 2.2.3). Anticipation meant that the boys seemed to be aware of what was coming next. They were alert and ready for the next movement or reaction. Expansion meant that they prolonged the play and started to add technical and musical elements in their music making. There were hints of extension in how they reacted to each other by commenting. However, extension in the sense of organizing their work differently in order to facilitate more possibilities in making music would have required more time and a different educational setting. Nevertheless, the above criteria were evident in their music making along with their ensemble playing and the tangible feeling of togetherness.

According to the substance of the episodes and the teacher’s intensity ratings, they worked step by step with a rising Intensity of Interaction. The function of the interaction supported the ongoing flow in playing. Overall, the activity of anticipation, preparing for the next task, in their interaction seemed to facilitate their communication and understanding.

T: I think we communicated fairly well together. They knew what I wanted and I knew what they were about to say about it.

The final outcome of all that they could do was an invitation to perform in the spring concert. The understanding seemed to really meet in the episode of musical re-contextualization (16/40), in which they had silent and deep communication. The communication according to the teacher was intensive also in episodes 1, 7, 9, 12, and 16. For those episodes and also for episodes 28 and 29 she gave a 90% intensity rating.

Topic	Pii Paa		4th doll, together		I forgot, 5th doll				Concert	
Teach	ctrl/ tch, ens, rtp/ mship	xpl/ ens/ mcal	ctrl/ rtp, ens, prf/ mship+ mcal	xpl/ ima, body , tch/ mship	ctrl/ rtp, ens, prf/ mship+ mcal	nar/ ima, tch, body, ens/ mship	ctrl/ rtp, ens, prf/ mship+ mcal	xpl/ prf, ima, tch, body/ mship+ mcal	ctrl/ ens, tch, body/ mship+ mcal	xpl/ prf, ima/mrc
Stud	ctrl/ tch, ens, rtp/ mship	xpl/ ens/ mcal	ctrl/ rtp, ens, prf/ mship+ mcal	xpl/ ima, body , tch/ mship	ctrl/ rtp, ens, prf/ mship+ mcal	ctrl/ ima, tch, body, ens/ mship	ctrl/ rtp, ens, prf/ mship+ mcal	xpl/ prf, ima, tch, body/ mship+ mcal	ctrl/ ens, tch, body/ mship+ mcal	xpl/ prf, ima/mrc
Epis	7/40	8	9	10	11	12	13	14	15	16
Dur	12	8	5	47	52	43	58	19	47	20
IR% T	90	20	90		40	90	50	70		90

Table 8.15: Assembling episodes at cello group lesson L22

The rather long flow experience of group playing did have minor obstructions, which the teacher illustrated with a lower percent (Figure 8.10). Intensity ratings 60 in episode 3, 20 in episode 7, 40 in episode 11, 50 in episode 13 indicated based on her description disturbances in the flow and in the interaction.

In one sequence (episodes 1–16), I identified four objects of the lesson activity: seven episodes were musicianship, seven musicianship + musical, and one episode was musical and one episode of musical re-contextualization. The balance of the objects was in line with the technical preparation theme with plenty of music. Episodes 4, 7, 9, 11, 13, and 15 were similar, with control on musicianship or control on musicianship + musical. These episodes contained control on technique, rhythm, and ensemble playing. They talked about the same matters in the intermediate episodes 2, 5, 8, 10, 12, and 14. The sequence seemed to have a quite systematic step-by-step rhythm.

8.2.9 Using Metaphors

As mentioned previously (Section 8.2), all lessons featured some metaphoric use of language. Particularly, the narrative mode of communicative activity highlighted such metaphors. The strategy of metaphor use was usually also connected to other strategies. In the case of segments in which the combination of metaphors and other strategies were prolonged and expanded, the Intensity of Interaction usually strengthened. Use of metaphorical images

was a common strategy characteristic to the strengthened segments of Intensity of Interaction in lessons L17 and L22. In these examples, the episodes of musical re-contextualization were expansions of what had been accomplished in the preceding sequences of episodes. The imagined context, playing in a big symphony orchestra and in the spring concert, promoted the tension between situational sense making versus awareness of reality: the imaginative context was real for the learners even though they were aware of the present situation in the class. This was also true in the first cello group lesson (L18), where the teacher and students engaged themselves with the metaphor of the Old Castle (Table 8.13c).

Metaphors seemed to be the major teaching and learning strategy in lessons with young students (L13, L18-L22), however teachers and mature students in other lessons also applied stories, figures of speech, and comparisons. When the use of images was a leading mode of communicative activity, I coded these episodes as narrative. The analysis found that 4,5% of all social languages were narrative (see Table 7:19). However, the other modes, explanation and control, consisted of metaphors as well, only the used images were in those cases merely means of the dominant mode of communicative activity. For example, in the violin lesson L2, the teacher was controlling the tempo (see Table 7:13) saying that

T(L2): I feel that you should play this a little faster, it is somewhat sticky, more winds on the back, sneeze the upbeat...

In violin lesson L5 the explanation included an image of the tonality (see Section 8.2.2)

T(L5): This was a sunny introduction with some shy and playful places.

In both of these segments Intensity of Interaction was sustained (see Appendix 6).

8.3 Summary

This chapter has explored the meaning construction in the lessons through the Method of Voices and the provided intensity ratings. The examples articulated the process of teacher-student sense making and teaching and learning strategies on the level of actions and operations of the activity of musical pedagogy. Intensity of Interaction within the lessons demonstrated the supporting and contrasting elements of the reciprocal work by the teachers and students. Therefore as a conclusion, the musical and pedagogical meaning construction

under each teaching and learning strategy had a situational connection to Intensity of Interaction. However, in many cases other elements of teacher-student work were also present in their musical interaction.

Based upon the teaching and learning strategies identified (section 8.2), the following interpretations were reached: (a) *instruction by complete patterns*, Intensity of Interaction was often sustained, while the work focused on detailed musical and technical proximal goals and targets. In (b) *arousal by variation of objects*, the alternation of foci was connected to both sustained and strengthened Intensity of Interaction (see the lesson maps in Appendix 6).

Although both (c) *ensemble work*, playing together and the last minute work, and (d) *stimulation by urgency*, inspired the teachers and students, the segmental Intensity of Interaction had different qualities. As the example of the violin lesson (L10, section 8.2.3) demonstrates, Intensity of Interaction was both strengthened and sustained during different segments of lessons, a point also evident in other lessons.

Intensity of Interaction appeared to be more stable within the strategy of (e) *concrete tools*. These segments were often strengthened.

Praising and positive but accurate feedback (L8, L12, L14, L15, and L17) are actions Intensity of Interaction in segments associated with the strategy (f) *open up and ease off* were often diminished. These diminished sequences and segments consisted of accurate feedback as well as relaxed small talk

As the example from vocal lesson L16 (Section 8.2.6) demonstrated, Intensity of Interaction alternated parallel to the changes of objects. The shift focusing on the object musical + musicianship (Appendix 6) facilitated a strengthened segment after a rather long period of intensive work on the student's voice technique. The strategy of (g) *changing the object balance* enabled extension and expansion in the musical and pedagogical work.

The strategy of (h) *merging musically*, combined technical and musical matters. In these strengthened segments the teachers and students used mostly musical means with minimal verbal communication.

In strengthened Intensity of Interaction, for example, for maintaining musical flow, they added (assembling) musical and technical complexity, while in segments in which they separated (dismantling) musical and technical matters, Intensity of Interaction was often diminished.

Finally, the teachers and students often used the strategy of (j) *metaphors* and stories. These segments of Intensity of Interaction were usually sustained, however, in combination with other strategies the segments were strengthened.

The presentation concerning musical and pedagogical meaning construction connected to Intensity of Interaction continues in Chapter 9 by summarizing the acquired findings of the analysis. Hitherto focusing on Intensity of Interaction, the analysis now widens its perspective from actions and operations within the episodic meaning constructions to the musical and pedagogical activities within segments.

Chapter 9

Results IV: Intensity of Interaction as musical and pedagogical activity

This chapter offers a concluding discussion of the findings from this study, and aims to demonstrate Intensity of Interaction as a means for lesson description, leading to a deeper understanding of the teacher-student dialogue. The results from this analysis of the teaching and learning processes in instrumental lessons show that Intensity of Interaction serves to enhance understanding of (i) the lesson activity as a historical and cultural whole, and (ii) the details of teacher-student work in musical and pedagogical dialogues.

To demonstrate Intensity of Interaction in the instrumental lesson, the following summary of the results (Table 9.1) illustrates the concrete features that support and affect musical and pedagogical activity in the instrumental lessons. These findings are distinct and at the same time intertwined. The first finding defines Intensity of Interaction as a description of teacher-student work by dynamic processes that characterize and structure the interaction in the lessons. The second finding highlights how inner contradictions demonstrate the character of the teacher-student meaning construction. The third finding regarding Intensity of Interaction is related to managing musical and pedagogical meaning construction and sense making. This means that the emerging tensions served as a reference for teachers and students in their interactive musical and pedagogical problem solving.

	The Intensity of Interaction
1	... changes along with the process of interaction and takes dynamic appearances in sustained, strengthened, and diminished segments
2	... appears to be sensitive to inner contradictions
3	... is related to managing musical and pedagogical meaning construction and sense making

Table 9.1: Conclusions concerning Intensity of Interaction

The first finding of the analysis demonstrates that Intensity of Interaction emerges in three kinds of dynamic processes of teacher-student communication (Table 9.1). The three interwoven units of analysis – episodes, sequences and segments – provided information both separately and in combination for the analysis. The examples of Chapter 8 highlighted the

different characters of the multifaceted processes in the musical and pedagogical meaning construction and sense making. On the one hand, these descriptions articulated the tendencies and intentions of the shared meaning construction. On the other hand, the distinct voices, social and cultural perspectives, of the teachers and students emerged through the analysis of episodes and sequences within the segments. Conclusively, the differences in the dynamics of lesson interaction named as sustained, strengthened, and diminished tendencies indicate qualitative differences in the Intensity of Interaction.

The second finding proposes that Intensity of Interaction appears to be sensitive to inner contradictions emerging from diversity of elements in musical and pedagogical problem solving. The distinct voices of teachers and students, deviations from the maintained script, breaks, dilemmas, disturbances, and innovations (see Chapter 4) were external signs of some inner tensions. In managing the emerging tensions, the teachers and students searched for various solutions in and through their musical meaning construction and sense making. In the analysis, the dynamic changes of these processes of communicative activity appeared to be connected to the varying Intensity of Interaction. The listed pairs of tensions further in this chapter will articulate the dynamics of the teacher-student interaction.

Respectively, the third finding demonstrates the relation between Intensity of Interaction and the musical and pedagogical meaning construction and sense making. The dialogical perspective in this analysis explored and discovered mediational means, modes of communicative activity, and objects of the shared work with the process of making musical and pedagogical sense (see examples in Chapters 7 and 8). The relationship between Intensity of Interaction and teaching and learning strategies emphasizes the “professional” character of the lesson interaction (Kuusela 2002; see Section 2.5). The analysis of the lessons found that the dialogical processes mainly consisted of combinations of contents, musical and pedagogical targets, proximal goals, and communicative means within episodes and sequences. The alternating combinations of these factors were clearly connected to qualitatively different periods of the ongoing process of musical and pedagogical problem solving (Section 8.3).

As a qualitative feature of meaning construction and sense making, Intensity of Interaction was sensitive to contradictions that originate in the instrumental lesson reference. The reference to music, learning, past experiences, future expectations, and activities closely

connected to the lesson depends on local interpretations of the participants in a lesson. The lesson interaction therefore becomes a time and place to engage with the reference of the participants. In order to proceed in the process of instrumental learning, the students and teachers of this study searched for meaningful approaches. Furthermore, the transition (movement) between different approaches enabled rejuvenation of meaningful reference via collaborative construction of richer learning experiences.

9.1 The character of the lesson interaction

The following descriptions summarize the findings concerning three distinct characters of teacher-student interaction. Based on the analysis of empirical data, the following Tables (9.2; 9.3; 9.4; and 9.5) and the discussion demonstrate the sustained, strengthened, and diminished Intensity of Interaction in the instrumental lesson interaction. Generally speaking, these qualities of the musical and pedagogical meaning construction were unique combinations: Each lesson seemed to have its own dynamic structure. The structure alternated between lessons, seemingly without consistency. The length of the segments was rather clear: the boundaries settled at the move from one exercise to another or from a part to another musical composition. In some lessons, the length of a theme (segment and sometimes a sequence) was based on the pedagogical or didactical content, particularly when the working sessions continued at length with the same musical material. Sometimes these prolonged segments, which lengthened in time, consisted of several sequences. Table 9.2 illustrates the number, order and location of the segments in the lessons.

In 40 of the 92 segments, the Intensity of Interaction was sustained, in 30 segments it was strengthened, and in 22 segments diminished. The division of the segments seemed to balance evenly within the lessons, which indicates active, focused, and interactive approaches to teaching and learning. All three kinds of segments appeared in twelve lessons (L6, L8, L9, L10, L12-L14, L16, L17, L19, L20, and L22). All lessons had sustained segments. However, six lessons (L2-L5, L11, and L15) lacked strengthened segments, while seven lessons (L1, L3, L7, L11, L18, L21) had no diminished segments. Three lessons (L3, L5, and L11) had only one kind of segments. These sustained segments consisted of many complete instructional sequences, dominated by a teacher-oriented interaction.

Lesson	Duration	Epis	sg 1	sg 2	sg 3	sg 4	sg 5	sg 6	sg 7	all	sus	str	dim
L1	0:22:04	21	sus	str	sus					3	2	1	0
L2	0:20:38	26	sus	sus	dim					3	2	0	1
L3	0:20:42	20	sus	sus						2	2	0	0
L4	0:27:17	21	sus	dim						2	1	0	1
L5	0:27:31	26	sus	sus						2	2	0	0
L6	0:53:30	56	sus	dim	str	dim	str			5	1	2	2
L7	0:32:42	33	sus	sus	str					3	2	1	0
L8	0:50:25	44	dec	sus	dim	str				4	1	1	2
L9	0:29:36	27	str	sus	str	dim				4	1	2	1
L10	0:26:49	29	str	dim	str	sus				4	1	2	1
L11	0:39:29	48	sus	sus	sus	sus				4	4	0	0
L12	0:39:29	27	dim	str	sus	sus	dim			5	2	1	2
L13	0:06:29	12	str	sus	dim	str				4	1	2	1
L14	0:42:06	41	str	dim	str	str	sus	dim		6	1	3	2
L15	0:54:30	53	sus	dim	dim	sus	str			5	3	0	2
L16	0:37:41	54	str	sus	str	dim				4	1	2	1
L17	1:01:06	60	str	str	dim	sus	str	str	sus	7	2	3	2
L18	0:16:56	38	sus	sus	str	str	sus	str		6	3	3	0
L19	0:32:42	49	sus	str	sus	dim	sus			5	3	1	1
L20	0:25:28	38	sus	dim	sus	str				4	2	1	1
L21	0:23:09	42	str	sus	sus	str				4	2	2	0
L22	0:22:58	40	dim	str	str	str	dim	sus		6	1	3	2
total	11:53:17	805	22	22	19	16	8	4	1	92	40	30	22

Table 9.2: Division of segments according to descriptions of interactional dynamics

The frequencies of the sustained, strengthened, and diminished Intensity of Interaction in the map of segments in Table 9.2 might seem situational and unpredictable, yet they did not come about randomly. In fact, as previously discussed in the introduction of this chapter, the proactive intentions, for instance, were clearly present in the sequences of episodes. In addition, the analysis of voices, intensity ratings, and interviews provided evidence for the interpretation that anticipation was embraced in the teaching and learning strategies of the lessons. For example, many of the lessons (L9, L10, L14, L16, L17, L21) started by a strengthened Intensity of Interaction, with the intention to warm up and introduce the themes of the lesson. The same intention was present in other lessons, too. However, the Intensity of Interaction in some of the warming-up segments was diminished, while in some it was sustained.³⁷ The segments had the same intention of warming up, and yet the Intensity of

³⁷ Note that warming up was not always the intention of the first segments.

Interaction in the segments altered. This altering tendency of the segments emphasizes the initial conclusions (Table 9.1) concerning Intensity of Interaction: Intensity of Interaction changes along with the dialogical process, is sensitive to inner contradictions and tensions, is dependent on musical and pedagogical meaning construction including the teaching and learning strategies.

For example, a sustained segment in lesson L5 started with arousing the student. The method of alternating objects, targets, and means of communication expanded and prolonged the activity (see Section 8.2.2). This would presume a strengthened Intensity of Interaction. However, this segment remained sustained, because the contradiction of musical expression versus worry of instrumental competence dominated the teacher-student interaction. As an outcome, the examples of musical and pedagogical meaning construction in Chapter 7 and 8, and the contradictions this chapter will present, demonstrate that the teaching and learning methods and strategies in different lessons end up with different kinds of Intensity of Interaction.

In the following summary of analysis concerning the different segments, descriptions of the character of each segment aim to open their general meaning, while the excerpts refer to the teaching and learning strategies, objects and modes of communicative activity in the lessons.

9.1.1 Sustained segments

The term sustained means to support, hold, and bear up from below; to support (a cause or the like) by aid or approval; to uphold as valid, just, or correct, as a claim or the person making it; to confirm or corroborate, as a statement.³⁸ In parallel, sustained segments in the analysis of this study seemed to maintain and support the learning process by approval and confirmation. Supportive elements such as variation of objects, content and tools, short repetitive episodes and complete sequential patterns prolonged and expanded the segments and kept the Intensity of Interaction from declining. However, many of the segments remained sustained and were not strengthened, because the emerging internal contradictions tended to hold back the musical and pedagogical process.

³⁸ Dictionary.com

The structure within many sustained segments consisted of sequences of episodes with explaining on musicianship followed by one or two controlling on musicianship episodes. The episodes and sequences consisted of several complete sequential patterns of instruction. This script was quite consistent almost all the time in these sustained segments (e.g. L2:sg1, L3:sg1).

The following characteristics of the sustained segments in the empirical data are all examples of active and energetic teacher-student interaction (Table 9.3). Active participation of both the teacher and the student seemed to be central to the process of continuation of sustaining interaction: their work was well focused on the proximal goals at hand, and therefore, many of the sustained segments were lengthened further.

Description of sustained segments	Examples of Occurrence
- democratic way of solving musical and technical problems	L5, L8, L14:sg5, L17
- teacher loosening up and student more active, the interaction in balance, they maintained equality of the process	L10, L15
- extended sequences and episodes by repeating, varying, and by providing positive support and specific feedback	L9, L11, L14
- repetitive episodes with similar musical and technical targets	L1-L4, L16
- more playing less talking, short sentences within playing	L12-L14
- using mimicry, gestures, body language in communication	L12-L14, L15, L16
- short and rapid episodes with complete sequences of instruction	L1-L4, L15, L16. L18-L22
- varying episodes in sequences: students and teachers seemed to have different proximal goals in mind	L5-L8

Table 9.3: Description of the sustained segments

The interaction in the sustained segments in Table 9.3 maintained strategies like democratic dialogue, repetition, variation, positive support, and specific feedback. The episodes were often short, repetitive, and rapid with more playing, body language, and mimicry than talking,

Although the active, energetic, and enthusiastic teacher initiative and attendance was evident in all lessons all the time, the sustained teaching and learning process was not based only on the active teacher work. The character of the lesson interaction seemed to change in

the flow of the shared meaning construction. As a result, less than half of the segments were sustained (Table 9.2).

Consequently, during sustained segments students also were active in playing, testing, and commenting on the musical learning process. For example, sustained segments often had verbal student initiatives. In lesson L14, after two strengthened and prolonged segments, the segment 5 had a balanced dialogue. This sustained segment had student initiations in all four episodes. The student had suggestions and questions about the dynamics (L14:sg5:33-36/41). In lesson L15, segment 4 was balanced by four student initiations, in which the student started to grapple with the emotional extremes of the song (L15:sg4:39, 43-45/54). Nonverbal balance by mimicry and musical dialogue also created sustained segments. For example, in these segments of lesson L12, the teacher and student worked for a rather long time mainly through non-verbal communication (L12:sg3, 4).

The didactic variation of strategy was common to many sustained segments. These segments consisted of altering voices (e.g. L5:sg1, L5:sg3, L19:sg3, L20:sg1), alternating targets (e.g. L18:sg1, 2), and alternating subjects (e.g. L18:sg5). The instrument-specific technical proximal goals were the focus of many sustained segments. These segments included systematic and consistent work for harnessing breathing, bowing, position shifting, and the like technique with repetitious sequences of episodes (e.g. L1:sg1, L2:sg2, L3:sg2, L4:sg1, L16:sg2).

The sustained segments were sometimes interrupted by minor disturbances, which appeared in the script unexpectedly and sometimes intentionally. It seems that without these opportunities for relaxation, body movement, talking, or the like, the segments would have diminished shortly rather than continued at the same level of interactional energy. In lesson L3, between two sustained segments, the teacher suddenly stopped and remarked on how much the student had grown and how her pants had become so short (L3:eps7/20). Lesson L11, with four sustained segments in a row, had several minor disturbances all the time, because the next students, two little girls, came in and out several times. During the second segment the telephone rang (sg2:15/48) and the girls went for drinks (sg2:29/48). The prolonged segment at lesson L16 was interrupted by a sudden telephone call. This eight second long episode (21/54) offered a slight pause, which made it possible to go on with the same exercises for another five minutes in that segment (L16:sg2). In lesson L19, one boy

cellist came late but quickly joined the others smoothly. Rather than allowing the new player's entrance disturb their ongoing work, the teacher welcomed the boy and took advantage of the additional elements his participation offered. Therefore, instead of diminishing their interaction, it remained sustained. However, the segment was prolonged because of the extra person joining (L19:sg1:10/49).

One would expect these kinds of dynamic variations in strategy, described above, to strengthen the Intensity of Interaction. However, the segments generally were sustained at the same levels. These sustained segments seemed to carry a tendency that restrained them from strengthening. Many of the sustained segments consisted of basic and repetitive work on a musical expression through a specific instrumental technique. Instead of letting the musical flow overwhelm, they worked on musical and technical details. This interpretation maintains that internal contradictions (see Section 9.2 below) affected or dominated these segments. Therefore, the Intensity of Interaction in the segments remained constant.

9.1.2 Strengthened segments

The definitions of “strengthened”, such as make strong, give strength to, add strength to, indicate that the Intensity of Interaction seems to be gaining power and energy. Synonyms like buttress, reinforce, fortify, and support³⁹ indicate that the meaning construction in these segments confirm, establish or encourage the shared object. Such an activity, in which the participants gain and increase power, charisma, and energy naturally seem desirable as an outcome of a lesson as such, and moreover beneficial for learning musical expression and performance.

The descriptions of the strengthened segments in Table 9.4 emphasize the combination of different strategies in teaching and learning. The teacher-student work has a clear and shared understanding of the proximal goals and objects. The musical means as well play an important part in the lesson interaction.

As with many sustained segments, the variation of objects, content and mediational means, and the use of short repetitive episodes extended in time and supported the interaction. Moreover, the interaction within strengthened segments expanded. The expansion was often equal with increasing complexity and developing variety in activity of teacher-student

³⁹ Dictionary.com

musical and pedagogical problem solving. This interpretation is based on the multi-potent nature of the strengthened segments. In other words, the interaction seemed to have power to influence several results by combining targets and tools, and using different mediational means in this process of meaning construction.

Description of strengthened segments	Examples of occurrence
- episodes with clear explaining	L1:sg2, L16:sg3
- provide and deploy specific tools for controlling	L14:sg3
- clear proximal goals	L6:sg3; L8:sg4; L10:sg1, sg3
- variation of shared objects and mediational tools	L16:sg3; L21:sg1; sg4
- positive, immediate, and specific feedback along with positive student attitude	L13:sg1, sg4
- student initiations with positive teacher response, students feel that the teachers are listening to their opinions	L16:sg3
- movement toward same direction	L16:sg1
- teacher advice with positive and open student response, teachers feel that the students are listening to their advice	L16:sg1
- experienced presence of both parties	L14:sg1
- experienced change in the musical and pedagogical process during a segment	L12:sg2, L13:sg4, L14:sg1, L16:sg3, L17:sg2
- repetition by adding content: piling up musical and technical targets so that they support each other, preparation for the next or more complex proximal goal	L14:sg3; L21:sg1
- change of the shared object	L16:sg3
- expanding sequences: object expansion for example musicianship into musical + musicianship, or mcal + mship into musical re-contextualization	L14:sg4; L17:sg2
- play more than talk	L12:sg2
- waking up listening, physical awareness with musical expression, warming up process, speeding up exercises	L16:sg1; L17:sg1
- successful performing of an exercise or assignment	L17:sg6
- positive immediate feedback	L17:sg6
- both teacher and student fully present for the period of time	L12-L14
- combined use of different senses, a kind of synergy by eye, ear, touching	L5-L8
- peace for searching on one's own	L16:sg1; L17
- spiritually relax and use your body as a whole	L16:sg1

Table 9.4: Description of the strengthened segments

For example, in the fourth segment of lesson 8, the teacher and student discussed the melody line of the music (expl/mcal, 31/44) followed by the student playing and teacher singing (ctrl/mship+mcal, 32/44), and suggesting to start more pianissimo in order to gain a

real crescendo (ctrl/dyn/ mship+mcal, 33/44), and again stating “not so loud otherwise the sound breaks, keep it beautiful not hero violinist, no macho sound“ (ctrl/dyn, snd, ima/ mship+mcal, 34/44), and adding technical details about the vibrato and bow in producing beautiful sound and emphasizing the trill (ctrl/ tch, snd, dyn, ima/ mship+mcal, 35/44). These added targets were effectively combined to produce the desired musical expression. This process signified the shared object of combined musicianship and music. At that point the formerly reserved student started to play music expressively along with the teacher. The Intensity of Interaction was strengthened.

These findings point to the shared work. Both parties – teacher and student – are active initiators, listeners, music makers, and innovators in the musical and pedagogical process. The process in segments with strengthened Intensity of Interaction expands the object of their work through the combination of mediating tools along with a combination of instrumental and musical targets. These combinations unfolded in time so that they prepared and added a perspective for the previous musical, technical, or didactic element (see also examples of assembling in Chapter 8).

9.1.3 Diminished segments

“Diminished” means to make smaller, reduce, become smaller or less, decrease. It is a gradual deterioration of power, diminution, a progression downward.⁴⁰ When Intensity of Interaction diminishes, it degenerates, weakens, and declines. One interpretation of the data was that the parties distanced themselves from the object of the lesson. In the last part of lesson four, for example, the teacher and student commented on the distance (L4:sg2). The student prepared for an entrance examination by playing a *Sonata by Telemann*. The teacher commented on her technique, while the student’s performance lacked musical phrasing, dynamics and rhythmic buoyancy. The emphasis on technical matters seemed to be a neutral stance or approach, which represented escape from a situation where the student already knew she would start with another violin teacher the next term. This segment was diminished by mistrust and had therefore a quite cool and correct atmosphere.

On the other hand, the diminished segments were also positive, relaxed and pleasant periods in the middle of prolonged and expanded teacher-student work. In segment 2 of

⁴⁰ Dictionary.com

lesson 14, the teacher and student talked and tried out some technical and physical topics for about four minutes (L14:sg2). This time-out came after a rather long strengthened segment and was followed by two more strengthened segments. Therefore, the declined segment was an important break and breathing point in order to continue later in a more focused and energized way.

The tendency of strengthened and sustained segments to necessitate slopes in the middle seems to be a natural characteristic of the Intensity of Interaction. Table 9.2 illuminates clearly how segments in lessons L6, L8, L10, L13, L14, L15, L17, L19, L20, and L22 follow this structure. Another structure seems to be a diminished segment at the end. In lessons L2, L4, L9, L12, L14, and L16, the last segments offered favorable withdrawals from strenuous or focused work.

Description of diminished segments	Occurrence
- extended by teacher or student with a reluctant response, negative attitude: don't want to get better, disparaging	L15:sg3; L17:sg5
- students' control stays on themselves, understating and self critique, negative opinion about self, about own playing or performing, comparing to teacher or peer students	L6:sg2, sg4
- focus of the dialogue gets stuck, no variation in targets or goals, object stays the same for extended period of time	L3:sg3
- loaded information, many targets at the same time with no variation, repeated control by same content	L3:sg3; L6:sg2
- no eye contact, eyes wondering, lost concentration	L6:sg2
- emotional unbalance, bad morning, or day	L6:sg2
- get irritated	L6:sg2
- worrying about technical or musical competence	L8:sg3
- talking and meta-talking, long speech by teacher	L8:sg1; L9:sg4
- time winning remarks, dodging actions and talk	L8:sg3
- sequences with organizing episodes, focus on activity not on music	L10:sg2
- scattered object	L10:sg2, L19:sg4, L20:sg2
- delayed fulfillment of a desire	L19:sg4
- contrasting goals of the participants	L20:sg2
- relaxing talking after extended playing	L12:sg5; L14:sg2, 6
- too much teacher direction, asymmetrical interaction, physical and mental exhaustion	L15:sg3; L20:sg2

Table 9.5: Description of the diminished segments

These examples point out the importance of the diminished Intensity of Interaction. They provided space and time for different kinds of interaction.

In contrast to the positive interpretation, the descriptions in Table 9.5, however, could indicate negative effects of the diminished segments. Descriptions like reluctance, self-critique, obstructed dialogue, physical and mental exhaustion, negative emotions, delayed fulfillment of desires, worrying about technique or the like often indicate stress or failure in the lesson interaction. But during the examined lessons, the diminished Intensity of Interaction of these segments also meant space and time for reflections. Therefore, as an outcome, the negative features appeared to have a positive effect on the lesson interaction as a whole.

The diminished segments, by definition, direct the interaction toward a more relaxed, open, and free approach; an escape from the pressure of performing operations at a rapid pace and with great effort. The physical and mental adjustment within the diminished segments of Intensity of Interaction often included repetitive episodes and sequences. Quite naturally, the repetition accumulated musical, physical and instrument specific information, which seemed to necessitate time for consideration and adjustment. Therefore, these segments offered distance from the matters at hand, space for mental and physical exhaustion to surface come out and also a chance to recover. Consequently, Table 9.5 shows that many diminished segments prepared the teacher and the student for a continuation of the work in another strengthened segment (L6:sg2; L8:sg3; L10:sg2; L12:sg1; L13:sg3; L14:sg2; L15:sg2, 3; L17:sg3; L19:sg4; L22:sg1).

The prolonged diminished segments like L2:sg3; L15:sg3, L16:sg4, L17:sg3 and L20:sg2 prompted pondering, meta-talk, and the confronting of ideas in the dialogue. According to the interviews, the participants acknowledged the importance of this kind of reflection. A music student often faces symptoms characteristic to crisis. Learning happens through crisis, as the vocal teacher (L15 and L16) commented. However, even small crises have to have a place where they can discharge: these situations necessitate reflection in order to presume learning (Gaunt 2006).

By valuing crisis management as an opportunity for learning, the vocal teacher expressed the importance of the diminished segments as a part of the whole scale of segmental alteration. Understanding instrumental lesson work through Intensity of Interaction therefore

offers a view of the dynamics of the musical learning process. From the perspective of understanding learning, the Intensity of Interaction is an interpretation of experienced intentions and expectations rather than a technical term which directly demonstrates the observed behavior. With regard to how the teacher and student perceive music and work in instrumental lessons, the concept of Intensity of Interaction opens the curtains to the often unconscious or unrealized values, intentions, expectations, and emotions in learning. These characteristics of the exercised teaching and learning strategies may include contrasting approaches. Thus, solving musical and instrument-specific problems in the course of lesson interaction deals, after all, with internal contradictions. Therefore, the analysis of segments of Intensity of Interaction also explored the internal contradictions within the lesson dialogue.

9.2 Internal contradictions within instrumental lessons

The analysis uncovered internal contradictions related to the Intensity of Interaction. Each of the sustained, strengthened, and diminished segments depicted tensions that emerged in the lesson interactions. In their comments in the stimulated recall interviews, teachers and students discussed breaks and obstructions in the flow of their communication. Moreover, the character of the contrasting intentions was visible in the observations, in the transcript, and in intensity ratings as well. Although the participants did not articulate or analyze their speech and actions theoretically, they pointed out dilemmas and deviations in the lesson interaction they had experienced. As I have explained previously in Chapters 3 and 4, these external signs were based on the internal tensions, the double nature of each commodity: use value and exchange value. Y. Engeström (1987, 82–83) explains that

the basic internal contradiction of human activity is its dual existence as the total societal production and as one specific production among many. This means that any specific production must at the same be independent of and subordinated to the total societal production. Within the structure of any specific productive activity, the contradiction is renewed as the clash between individual actions and the total activity system. This fundamental contradiction acquires a different historical form in each socio-economic formation.

The activity of musical teaching and learning represents a specific production for musical and instrumental purposes. In this activity system, the purposes of lessons are independent of and subordinated to the historically developing social context of musical traditions. Consequently, as the introductory chapters stated, the teachers and students of this study

seemed to aim for change and development. Generally they followed the cultivation of musical expression and instrumental skills, which have evidently become the emphasis of the Western tradition of instrumental teaching and learning (Gaunt 2006; Hultberg 2008; Karlsson & Juslin 2008). Therefore, it has been reasonable to expect developmental outcomes in musicianship, technical aptitude, musical understanding, and quality in performance during instrumental lessons.

The aim for change in students' performance may, as a possible effect, also include the development of the whole activity system of teaching and learning in instrumental lessons. As discussed in Chapter 3, even though teachers and students were reluctant to consider radical changes in the traditional setting of an instrumental lesson, the lessons I recorded for this study had ingredients of such developments. Therefore, sprouts of traditional versus new educational settings came out in the analysis of this study. These contradictions could be traced to all corners of the activity system of musical and pedagogical meaning construction in instrumental lessons. Generally speaking, Figure 3.5 illustrates tensions which are parallel with those Y. Engeström (1987) pointed out in school-going activities (see Section 3.2.4).

To explicate, this study found several kinds of tensions, which point to the clash between use value and exchange value of music making. The tensions in the following examples are not a comprehensive list and not even an overview of all layers of contradictions; the tensions became visible in the analysis of the lessons activity. The nine examples below merely demonstrate an approach, which clarifies the construct Intensity of Interaction by the principles of Activity Theory.

(a) Musical expression vs. worry about instrumental competence

In lessons L5 to L8, the teacher and student worked consistently on Mozart, trying to arouse the student's musical expression. For this proximal goal they used stories, images, and metaphors. Therefore, rather long episodes prolonged their interaction. The dialogue consisted of constantly varying combinations of social languages. For example, in two sustained segments in lesson L5 the social language and particularly the object of the lesson alternated constantly (L5:sg1:1-12/26). However, the student hesitated and was reluctant to go along with the music-driven work. She worried repeatedly about her technical competence. Therefore, the flow of music never really took over in the interaction; it remained sustained.

(b) Detailed work vs. musical expression

Sustained segments in lessons L9–L11 seemed to be based on persistent teacher and student work. Both actively maintained their conviction of what was musically and technically important at that particular moment. The student wanted to play through and enjoy the flow of the expression, whereas the teacher asked him to stop and play slowly in order to control the intonation, right notes, changes of positions, and the flexibility of the bow strokes. The tension between the two approaches, the overview of musical expression and the detailed work, held back the dialogic process from being strengthened.

These examples point to how the teacher-student dialogue was sustained by the emerging internal tensions. The Intensity of Interaction was sustained by shared efforts for change in musical expression. The tensions, however, were not strong enough to overturn or dump the interaction, joint work on the object, which would, as an effect, have most likely lead to diminished segments. The tensions hindered the dialogue any how from expanding into strengthened Intensity of Interaction.

(c) Individual work vs. cooperation in a group

The two kinds of group lessons, one of two flute students (L17) and the cello group lessons (L18–L22), had elements of both individual work and of cooperative work. In the diminished segment (L17:sg5) of the flute lesson, the work focused entirely on the performance of the other student. In her performance of the *Wilhelm Tell*, the student physically collapsed and they ended up doing a gym exercise (L17:40/60) for recovery. The possibility for individual space and pace offered time and peace for the individual student and for the whole teaching and learning process as well. The lesson had started with two prolonged and expanded strengthened segments (L17:sg1: warming up, and sg2: *Brahms 4th*) and continued by diminished and sustained segments (L17:sg3: intonation, and sg4: *Carmen by Bizet*). In this structure, the diminished segment 5 offered a possibility of preparation for still another prolonged and expanded strengthened segment (L17:sg6: *Faun by Debussy*).

Segments of individual work also occurred in each of the cello group lessons. The lessons had six sustained segments (L18:sg5; L19:sg3; L20:sg1, sg3; L21:sg3; L22:sg6) in which the teacher knelt down to each boy separately for adjustments or for a special assignment. These segments prolonged the teaching and learning process, gave personal attention to each participant, and offered each boy an opportunity to engage with the music at his own pace. One of the segments with individual work, in which the boys played the *Sun Song*, was strengthened (L19:sg2).

(d) Rules for music and pedagogy vs. rules of everyday life

An example of contradicting rules occurred in the cello group lesson (L22), in which the teacher and the boys seemed to formulate rules, which complied with the musical and pedagogical purposes. These purposes allowed and actually presumed active participation, which might have looked rather free to the parents of five year old boys. In the stimulated recall interview, the teacher described how she reacted quite strongly to the parents' attempt to maintain order at a certain point of playing. This episode (L22:sg2:7/40) came at the beginning of a strengthened segment and seemed to refuel the Intensity of Interaction between the boys and the teacher.

(e) Role of responsibility vs. role of musical immaturity

These extremes of division of roles appeared, when the violin teacher and student (L9) were working on the character of the *Concerto by Beriót*. The student seemed to find it odd to have so much artistic responsibility and threw the questions back. The teacher replied: "You mean I should teach?" These episodes (L9:sg3:18–20/27) came at the beginning of a strengthened segment and seemed to sharpen and focus their interaction.

(f) Student withholding vs. teacher activity

This tension emerged in the vocal lesson (L15). The interpretation that the focus in this lesson was not so much on teacher authority as on student withdrawal is based on the comments in the stimulated recall interviews and on the fact that the same teacher had a lesson with another student (L16), in which the balance of dialogue was quite different. The teacher's comment on the asymmetry in the stimulated recall was: "She's culturally grown up

like that.” After a performance-like run-through of the music, the lesson consisted mainly of feedback. Therefore to start with, the student seemed to expect the teacher to be more active. In addition, the student did not really take initiative in her responses. This culminated in the rather long (16 episodes in 6 sequences) diminished segment (L15:sg3). Finally, after the student had expressed that she was tired, their dialogue balanced up in two sustained segments.

(g) Active teacher instruction vs. pace of student’s learning

In lessons L1 to L4, the teacher was highly active and the student tried earnestly to repeat the technical exercises. The teacher’s advice and control was positive and supportive, and the concentration of the student seemed to hold. They reached their proximal goals, one of which was to perform the “*Perpetum Mobile*” by Böhm by using the sautillé bow stroke. However, they felt differently about the lesson activity. The differences in their average of intensity ratings (DAI) stayed distant most of the time. The stimulated-recall interviews supported the fact that the student felt incapable of mastering the new techniques or advice as fast as she had wanted to. Therefore, the Intensity of Interaction within the teacher-student work remained sustained. It did not diminish, even though they felt quite differently about the activity. This finding bears an internal contradiction in the lesson activity between active teacher instruction and the pace of student learning.

(h) Instrument specific technical tools vs. musical object

The teacher and student prepared for the coming entrance examination in lesson L4. The instrument specific technical tools and the adjustment of the gesture seemed to fit poorly to the appearing musical expression as an object of the lesson (for details, see Section 8.2.1 and Figure 8.1 and Tables 8.3a, b, and c).

(i) Technical vs. musical tools

The teacher and the student discussed the role of the bow hand in musical expression in the violin lesson L8. The student referred to the advice of another teacher with whom she had studied recently, and who made the student worry about her bow grip. The teacher emphasized that if the student fully focused on the music, relaxation in the bow hand would

ensue (see example a in this section). This tension, instrument technique versus musical tools, in expressing music was in a diminished segment (L8:sg3:14-19/44), in which the targets and proximal goals of the lesson scattered or dispersed momentarily. This declined moment of Intensity of Interaction was a turning point in their dialogue, because it made way for an expanded strengthened segment (L8:sg4:20-44/44).

Summary

As these nine examples illustrate, the emerged tensions are connected to the sustained, strengthened, and diminished Intensity of Interaction, demonstrating the dynamic character of the teacher-student meaning construction. Each of the characteristic tensions above explicate values that teachers and students emphasized in the particular lesson. Basically, the participants worked on the tension between use value and exchange value of, for example, musical expression (a, b, h, i), competence and cultivation (a, b, c), communication and pedagogical methods (c, d, e, f, g). These tensions can be traced as elements and, as well, at different corners of the sub-triangles of the activity system of an instrumental lesson (see Chapter 3).

9.3 Intensity of Interaction and sense making

Although the sense making of an instrumental music lesson is local and situational, the meaning construction originates also in past and future reference (see Chapters 2 and 4). The reference concerns the quality of music making and the identity of the teacher or student Elliott (1995) explains that musicians act and react in relation to the musical feedback inherent in the quality of their own music making. They evaluate their musicing and musical works in relation to the context of their actions: the accomplishments and reflections of mentors and peers past and present. Based on our intersection between and among social contexts, we can expect to generate beliefs and controversies about who counts as a “good musician” and about what counts as “good music making” (Elliott 1995, 41). The activities outside the lesson activity “create certain kinds of scripts, beliefs, and expectations that also motivate the speakers” (R.Engeström 1999b, 112), in this case the teacher and student.

Similarly, the tensions that emerged in the lesson dialogue of this study were interpreted as having their origin outside the lesson activity. For example, the tension of different

teaching and learning cultures (f) in the singing lesson (L15) can be seen as originating in the past experiences and traditions that the student had been used to in another country. Likewise, the tension of rules (d) in the cello group lesson originated from activities at home or in school. Moreover, in the example (b) in the violin lesson (L10) the student's initiatives to achieve musical expressions versus the teacher's interest in cultivating the details were seen as related to different interpretations of requirements concerning the coming performance. This orientation toward the future caused various deviations, disturbances, and innovations.

In lesson L8, the student's comment: "I can't play with a noble sound" offers an example of a referential object in the past. Something in her past experiences has convinced her about not being able to produce "noble" sounds like "master violinists" do. The student's comment also referred to the dilemma of identity, master violinist versus her present identity as a violinist. Her experiences concerning other violinists and their quality in playing compared to her own playing had convinced her of an ideal identity, which goes together with a "noble sound". Therefore, the teacher and student worked a lot with stories and images to create focus on music instead of on the student. Here again, the emphasis on one object of the lesson, instead of another, offered grounds for handling her ability to produce musical expression by sound.

In other words, the interaction of the teachers and students is a constant search, elaboration and application of different kinds of musical knowledge. This search for musical and instrument specific knowledge, as the results of this study highlight, took the form of transitions within the process of teaching and learning activities. Interestingly for this study, Hakkarainen (2008) has emphasized the optimal creativity and sense making, which leads to pupil's motivational development. The aim in the work of Hakkarainen is at preliminary school pupils' joint creativity. Hakkarainen and his associates have discovered that changes in teacher's orientation and teaching methods enable the production of cognitive developmental transitions in the classroom (Hakkarainen 2008). Sense making through motivation and creativity have become central also for this study. In investigating Intensity of Interaction the analysis found that sense making in the instrumental lessons occurred in different "worlds". Similar to Hakkarainen's Experimental School, the teachers and students of this study constructed locally in the lessons distinct activities, which can be categorized as musical play,

narrative play, and knowledge searching. The following sections have applied the transitions elaborated by Hakkarainen (2002a, 2008) to the context of instrumental music lessons.

9.3.1 Transitions within the activity of instrumental lesson

In musical teaching and learning, application of the model elaborated by Hakkarainen presumes a possibility for the transitions (see glossary in Appendix 8) during a lesson. This context is what Cole (1996) calls the fifth dimension,⁴¹ within which the play, narrative learning and problem solving of reality are possible simultaneously (see also, Hakkarainen 2002b). In terms of Activity Theory, the activities in Hakkarainen's theory of transition from play to school-going were tool producing activities: the activity of pretend role play prepared tools for narrative activity, while narrative activity produced tools for knowledge inquiring activity. Hakkarainen argues that the activity of pretend role play produces symbolic thinking, emotional imagination and identification, which become tools for narrative learning. This developmental activity of narrative learning produces modification of situations, experimenting, modeling, testing the model, and personal relationships. As an outcome, these features become tools in the knowledge searching activity. Hakkarainen outlined the objects of each activity as tensions: in role play a tension of "sense making versus awareness of reality" emerges, in narrative, with a tension between "sense making and meaning making", and in "knowledge searching between concepts and reality" (Hakkarainen 2002a, 77, my translation).

These tensions presented by Hakkarainen seem to deal theoretically with the sense making of learning activity. Therefore, the tensions demonstrate features of sense making that this study also describes via application of the construct Intensity of Interaction. This and the following sections discuss the Intensity of Interaction and the tensions that were found in this study on the musical teaching and learning process in instrumental lessons by adapting transition systems elaborated by Hakkarainen.

In the lessons of this study, all three kinds of activities appeared alternating successively. In the context of school going, the developmental curve described by Hakkarainen lasts many

⁴¹ The Fifth Dimension, called 5th D, is a (computer-supported) learning environment developed by Michael Cole at the University of California, San Diego. The activity framework in 5th D combines fantasy journeys with challenging problem solving. Children participate in the journey by moving through mazes in a series of computer games.

years for children. Based on the notion that creativity is domain specific, cognitive developmental transitions can be traced by describing the developmental activities that represent the core knowledge and skill of the domain. The core idea of transitions is that in order to contribute something of value to the domain, the existing set of, for example, skills, knowledge, or attitudes has to be transformed.

Through instrumental lessons, the teachers and students enter different “worlds” of musical and instrumental teaching and learning within a quite short timeframe. Therefore, to the contrast of children’s developmental stages or levels, this study prefers the view that the teacher and students constructed developmental activities. The quite short, yet, frequent “visits” to the distinct “worlds” in instrumental lessons supported each other creating developmental trajectories.

Similar to pre-school developmental transitions, it takes several lessons or several years to create and develop musical play, narrative learning, and knowledge searching activities for the purposes of instrumental lessons: these processes depend naturally on the starting points and the emphases of the teacher and student. Not all musicians successively enter the above mentioned imaginative or rational “worlds” as their teaching and learning strategy. The developmental activities in an instrumental lesson support each other in a cycle, which appeared at all ages and forms of lessons explored in this study. For the sake of clarity, an example from the lesson of the six year old boy (L13) begins the description.

The violin lesson L13 started out with role play. In a strengthened segment of Intensity of Interaction, the teacher asked the boy to correct the direction of the teacher’s bow and posture (L13:sg1). The teacher reinforced the boy’s efforts of inquiry by asking him to correct the teacher’s own posture and bow direction constantly during the lesson. Here, the change of roles gave the boy authority over an adult. The activity of role play provided tools for the boy’s inquiring learning. The role play brought sense making into the reality of studying the violin technique. At the same time, the boy was the master and still fully aware of his status as a young novice. On the activity level, this finding can be framed as a contradiction of problem solving in terms of sense making versus awareness of reality.

The narrative in the lesson was to drive a car. The student’s responsibility was to prevent an accident, namely a car crash. In parallel, the steering of the bow like a car on the street prevented crashing the sound of the violin. In this diminished segment (L13:sg3) the narrative

tale took over so that the boy was “lost in traffic” by playing around with his bow for a minute. This diminished Intensity of Interaction with the contradiction of sense making versus conventional meaning provided the boy with the opportunity to conceive the finesse of steering the bow at an imaginative level.

The transition to the reality of playing occurred in a strengthened segment (L13:sg4), in which they played “Twinkle, Twinkle Little Star” together combining the elements of technique and music they had discovered so far. This strengthened Intensity of Interaction was an example of contrasting the concept of good sound and the practice of musical reality in producing sounds by steering the bow stroke.

The analysis found three kinds of objects in the violin lesson of the young boy. The objects appeared, as Hakkarainen (2002a) states, in the form of cognitive tensions and contradictions. These tensions emerged in three different developmental activities within the central activity of instrumental learning. Figure 9.1 illustrates the interrelationships of musical teaching and learning activities: the musical play, narrative play, and knowledge searching activity.

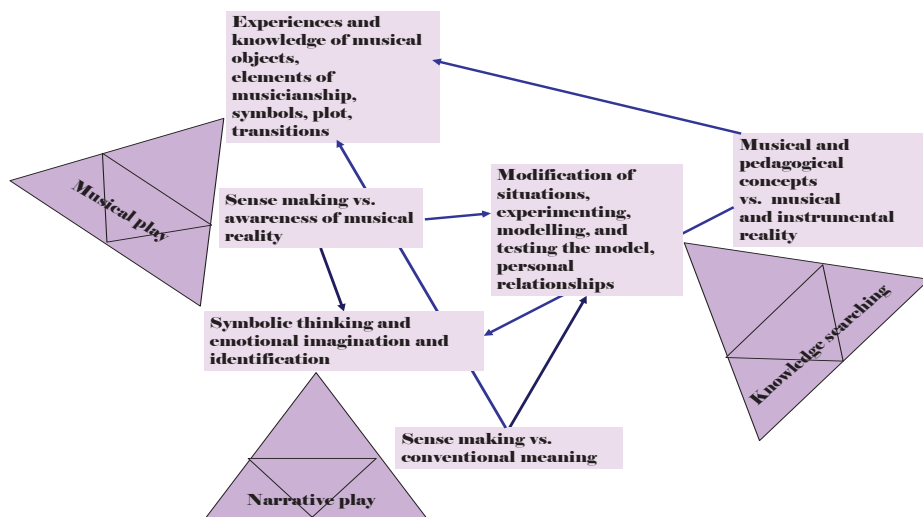


Figure 9.1: Transitions within developmental activities of the lessons

In Figure 9.1, the arrows point to the outcomes of each activity system. The outcomes become tools of another activity system. In other words, the developmental activities of

musical play, narrative play, and knowledge searching are tool producing activities for each other (see Chapter 3.2.4).

9.3.2 The developmental activity of musical play

At the level of concrete occurrences in musical play, the fundamental question for problem solving concerns the relationship between solutions in the sense making and awareness of musical reality. This contradiction is connected with the crisis of emotional identification as the musically oriented emotional self is coming forth. In his proposal for transition from play to learning activity Hakkarainen (2002a) presented how preschool children gain the potential for school learning through play activities. Schematic role play provides special tools for handling tensions between sense making and conventional meaning within the narrative problem solving. Within pretend role play, the plot, play objects, and transitions are the central tools for preparing modes of communicative activity like symbolic performing, emotional identification, and dialogic imagination. In Hakkarainen's model, the outcomes of the schematic role play become tools of narrative learning.

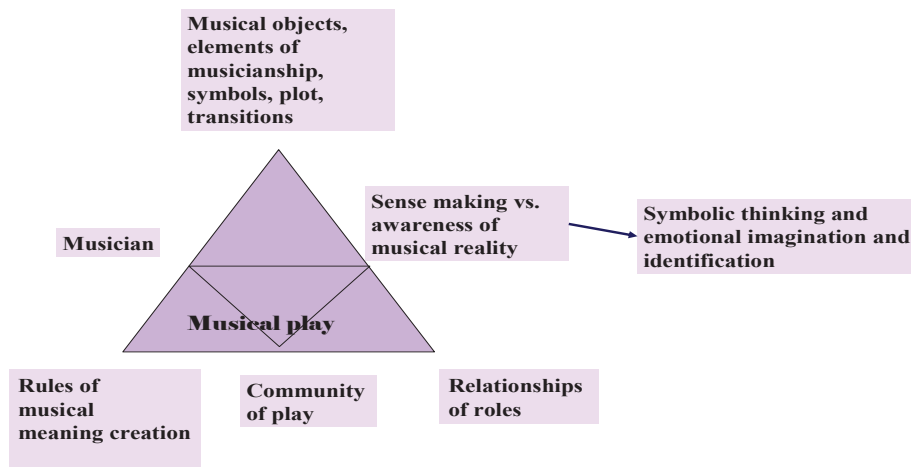


Figure 9.2: Elements within the activity of musical play

This study maintains that problem solving of the role play and musical play are after all much alike. The application in Figure 9.2 illustrates how the activity system of musical play is

quite similar with the one Hakkarainen (2002a) presented for the role play. For example, in lesson 13 the boy played the role of the teacher. In so doing he entered the teacher's perspective; he started using the teacher's voice. While his new perspective made sense in learning basics of violin posture and steering the bow, he was still a little boy and a beginner in violin playing. But the temporal shift to a new position empowered him to use his imagination and to join the community of musicians (master), with their rules and relations to other musicians (reference), and learn symbolic thinking, emotional imagination, and identification (outcome).

The young violinist entered the developmental activity of musical play as if it was an activity of a role play. Hakkarainen (2002a, 75) argues that the problem solving of children is not like the logical problem solving of adults. Problem solving in music, however, as this study maintains, offers possibilities at any age to solve musical matters with tools other than only logical reasoning. Based on the experiencing, emotional identification and realization of a musician's musical knowledge and skills, and facing own emotions, aspirations, and goals, the problem is not outside. Through various combinations of modes of communicative activity (see Chapter 7) the music makers are inside the problem solving. This situation resembles the schematic role play of children. Solving a musical problem means to live through the musical experience through use of relevant tools. The relationship to the problem is quite different from a rational, outside relationship. This situation opens doors to creative experiments.

9.3.3 The developmental activity of narrative play

Narrative play provides a context within which emotional association and experiencing are possible. The music student or learner enters and lives through a world, which has possibilities within reach of his or her hero subject. Stories mediate the viewpoint and the meaning of the storyteller.

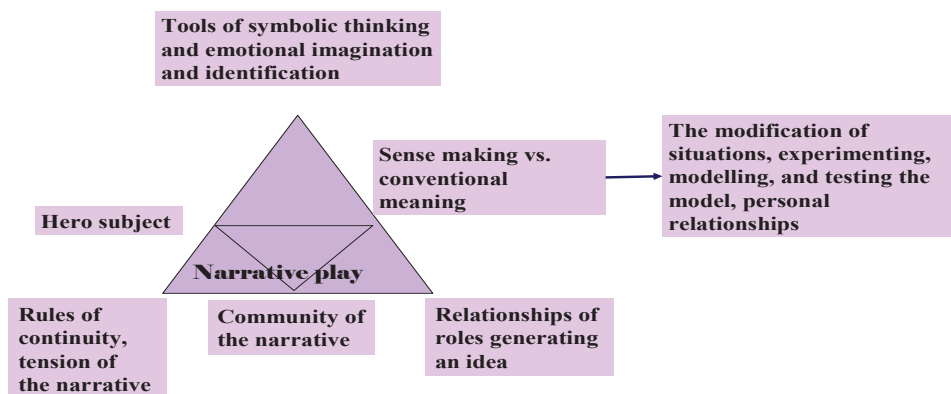


Figure 9.3: Elements within the activity of narrative play

In the application to music (Figure 9.3), the outcomes of role play enable a handling of the tension between sense-making and awareness of musical reality within the narrative learning. The young violinist (L13) dealt with the rules of traffic versus rules of violin playing by using symbolic thinking, emotional imagination, and identification (Figure 9.3). Through metaphoric sense making by steering the car versus dealing with the conventional meaning of steering the bow, the student explored how to handle the violin bow.

For Bruner (1986), narrative was a symbolic schema through which a child interprets the world. Narratives describe and organize the world in which the child lives and acts. This function covers both the inner and the outer world. Narratives and narrative learning naturally resemble an individual child's personal experiences and sense making. Bruner viewed a narrative as a condensation of life and endowed upon the story a special status as the unit of analysis for psychological development. Dewey described the power of a story in learning:

Much assistance in the selection of appropriate material may be derived by considering the eagerness and closeness of observation that attend the following of a story or drama. Alertness of observation is at height whenever there is plot interest. Why? The balanced combination of the old and new, of the familiar and the unexpected... alternatives are suggested, but are left ambiguous, so that our whole being questions: What happened next? Which way did things turn out? (1910/1933, 253)

Hakkarainen (2008) highlights the role of imagination, narrative learning, meaningful cooperation with others, and the creative nature of children's thinking. Narratives and stories are essential elements in developmental curriculum. He emphasizes the role of narrative learning in this task of aiming at constructing a developmental trajectory from play activity to school learning.

The proposal for a transitory system is the developmental activity of "narrative learning" which prepares children for learning. As a transitory activity system, it combines play and learning in a specific way by which learning is embedded in the play frame. Narrative learning is based on psychological products of developed role-play, but learning takes place in a space between imagined and real situations. Narrative learning combines in a flexible way the narrative frame of children's activity with complicated problem solving.

9.3.4 Knowledge searching

The shift to musical knowledge searching presumes competences that may develop within other activities. For example, the outcomes of narrative play (Figure 9.3) enable the student and teacher to handle the tension of concepts versus the experienced reality of musical practice. For this study, knowledge searching forms a developmental activity of its own in instrumental music lessons, because knowledge searching is central for learning, performing and expressing music, and fundamentally different from musical and narrative play.

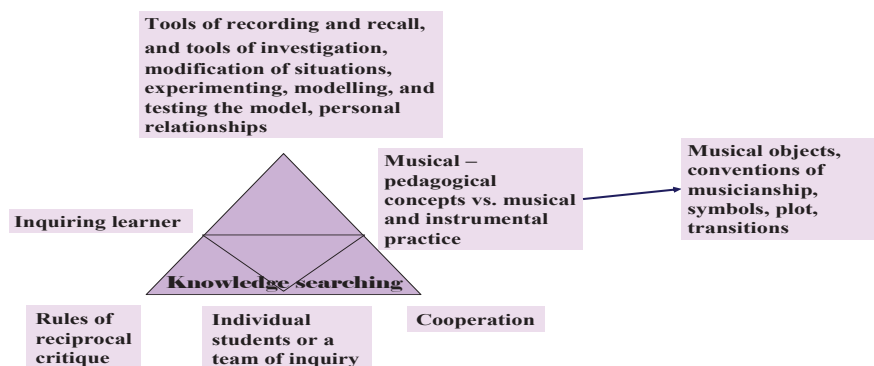


Figure 9.4: Elements within the activity of knowledge searching

The activity of knowledge searching offers an interpretative framework, within which teachers and students transfer information, including musical and instrument-specific concepts and conventions (Figure 9.4). Obviously, musical play and narrative play also are kinds of knowledge searching activities. Consequently, the manner of searching and the kind of knowledge varies within each activity. To be accurate, Bereiter and Scardamalia (1993) distinguish between formal, procedural, informal, impressionistic, and supervisory knowledge. Similarly, this variety of musical knowledge (Elliott 1995; see also, Chapter 4) provides a useful overview of the possibilities for knowledge searching within each transition activity of instrumental lessons. As a result, the transitions described above highlight the multi-layered musical and pedagogical meaning construction and sense making in the lesson interaction. This means that Intensity of Interaction in the teacher student work is sensitive to the shifts from one developmental activity to another.

9.3.5 Transitions between instrumental lesson activities

The analysed activities of transition added to the understanding of segmental Intensity of Interaction. For instance, the sustained, diminished, and strengthened segments during the violin lesson (L13) were rather short. They were only two or three episodes long. Therefore, the episodic meaning construction was the most appropriate unit for the purpose of identifying and distinguishing teaching and learning activities. For example, the violin teacher and student in lesson 8 reflected on the preceding performance of a Mozart concerto. During this segment of diminished Intensity of Interaction (L8:sg1:2–8/44), the first episodes (2–5) contained a discussion about the student as a performer, how “good” she thought the performance had been and if it was “good enough”. The teacher and student turned the focus to the music in episode 6 (xpl/ima/mc)⁴².

T: What else is there in Mozart’s music other than happiness and easiness?

St: It is light, sunny, and full of hope

The student seemed to realize that her playing sounded more as if she wanted to accomplish a task and play correctly than to concentrate on the music. She commented on this issue in episodes seven and ten.

⁴² Exp/ima/mc = Explaining by imaginative means on music

St: I don't really think whether I am playing correctly or not, it (my playing) just sounds like accomplishing a task. (7/44)

After playing, she commented again:

St: It (my playing) was again like accomplishing a task, I just can't get into that world (10/44)

In their knowledge search for the performance they discussed the dilemma of accomplishment versus musical expression. The turn from the object of musicianship to musical ideal in episode 6 was an attempt to coordinate the contrasting elements of the performance. The twofold aspects of the performance, conceptual knowledge versus the musical reality puzzled them. The first half of the lesson had a focus on the student's musicianship. During the second half with strengthened Intensity of Interaction (L8:sg4:20–44/44), the object was musicianship + musical in the eight episodes 28–37/44, out of which two episodes focused on music. They succeeded in moving from knowledge searching activity into musical play activity. Musical play was the world the student at first felt distant to and into which she conceptually wanted to enter. In this lesson, they did not work at the narrative level. However, the narrative play was a transition activity between the knowledge searching and musical play in the earlier lesson (L5–L7).

The analysis found similar turns through transitions in other lessons, too. The examples in Chapters 7 and 8 have described some of those turning points. Table 7.20 illustrates the clear change of object balance in lesson 16: another strengthened segment (L16:sg3:27–37) followed a strengthened (sg1) and sustained segments (sg2) (see Table 9.2).

Lesson L8 demonstrates the importance of the diminished segments of Intensity of Interaction (L8:sg1 and sg3; see Table 9.2). The tension of accomplishment versus musical search was so evident that it necessitated time for reflections and pondering of the arising questions. After having had space and time for discussions and attempts of playing, their musical play prolonged and expanded as a segment of strengthened Intensity of Interaction.

Apart from tool-producing activities, subject- and rule-producing activities appeared throughout the lessons examined. In musical learning, the student often faces contradictions of identity. Hargreaves, Marshall and North (2003) have emphasized the building of a musical self-identity, which grows in the centre of various forms of music education. As an outcome of musical studies, the growing musician builds up a self-identity which is at the core of

musical-artistic, personal, and socio-cultural contexts with which the student is engaged. Within these contexts a student may, however, face and manage intertwined tensions such as being, for example, a pop/jazz musician versus being a classical musician, soloist versus chamber musician, or singer versus an instrumentalist.

The analysis of the lessons in this study affirmed the view that the shifts between developmental activities enable qualitative growth of the instrument-specific identity of a musician. For example, as a role player, the student and teacher (L9) faced the tension of responsibility and immaturity, in other words, master and novice. In lesson L13, the boy was the master of his instrument versus the awareness of his everyday identity as young learner of the instrument. In lesson L8, in pretend role play the teacher and student handled through a hero subject emotions like serenity of courage versus fear of failure. At the same lesson the inquiring learners, the student and teacher found themselves with contradicting identities of high grade attainer versus music searcher or maker.

In the examples above, the student (L8) considered the contradiction between being an accomplisher versus a music maker. She also compared herself with “master violinists”. These role models seemed to direct her musical and instrument specific interests. However, at the same time, the contradiction between her idea of master competence versus awareness of her present violin playing had a heavy effect on their interaction.

The teacher and student interaction in the lesson L8 was also a rule-producing activity, in the sense that their comments concerned both instrument-specific and music-specific rules. Particularly in the third segment (L8:sg3:14-19/44) with diminished Intensity of Interaction, the instrument- and music-specific rules seemed to contradict.

St: How should I take the bouncing notes (...), I think they become “töks, töks” (...), she [another teacher with whom the student had worked] showed it in a quite difficult manner, but it sounded terribly fine anyway...

T: They (the notes) will sound “töks, töks”, if they are all alike. But if there is crescendo, then it is more interesting. Go on from somewhere, (14/44)

St: What she (another teacher) said about thinking the bow-hand disturbs me, because she said it would help to relax in the performance (...) I have such a rickety feeling when I perform... (16/44)

From here on, the teacher emphasized that concentrating on music would solve her problem in the bow hand. After the turn to musical play in episode 20/44, they were able to discuss the musical rules. These rules were significant for the elaboration of the musical expression,

and, therefore, the Intensity of Interaction within the segment strengthened. Analysis determined that the musical rules they worked on concerned what Swanwick (1999; 2008) calls care for music as discourse. Similarly, the student's music-making in the lesson was combined with encouragement of musical fluency and understanding of the teaching context. Because the context made sense, the instrument-specific rules became important for the musical fluency and expression.

In addition to the transitory developmental activities in one-to-one lesson, the peer and group lessons provided rich examples. The flute lesson L17 and cello group lessons L18–L22, had activities of narrative and role play in particular. The flutists worked on orchestra parts by constantly changing from musical play to knowledge searching, from narrative play to musical play, from role play to musical play (L17:10–22/60,sg2/strg). The middle row in Table 9.6 is an expansion of Table 7.11b.⁴³ The purpose of this chart is to illustrate how the episodic meaning construction and different musical and pedagogical activities were connected during the lessons.

L17	sg2 Brahms			Strengthened, extended Apollo Dionysus					Orchestra energy by vibrato				
t	xpl/ org/ prf/ ms	xpl/ rtp, ima, ens/ mc+ ms	ctrl, ens, prf/ ms	xpl/ ima, ens, org/ mc+ ms	Ctrl/ prf, ens, ima, org/ ms	ctrl/ prf, ima, har, int/ mc+ ms	xpl/ dyn, prf, org/ mc+ ms	xpl/ prf, dyn/ mc+ ms	nar/ prf, dyn/ mrc	ctrl/ prf, ima, dyn/ ms mc	ctrl/ prf, dyn, ens/ mc+ ms	ctrl, prf, dyn,rtp/ ms+ mc	xpl/ snd, rtp/ ms
act	kn	kn	mp	np	np	kn	mp	mp	np	mp	mp	mp	mp
	xpl/ org/ ms	xpl/ rtp, ima, ens/ mc+ ms	ctrl, ens, prf/ ms	ctrl/ ima, ens, org/ mc+ ms	Ctrl/ prf, ens, ima, org/ ms	ctrl/ prf, ima, har, int/ mc+ ms	ctrl/ dyn, prf, org/ mc+ ms	ctrl/ prf, dyn/ mc+ ms	nar/ prf, dyn/ mrc	ctrl/ prf, ima, dyn/ ms mc	ctrl/ prf, dyn, ens/ mc+ ms	ctrl, prf, dyn,rtp/ ms+ mc	ctrl/ snd, rtp/ ms
epis	10	11	12	13	14	15	16	17	18	19	20	21	22
dur	24	44	81	135	99	125	170	82	99	59	44	56	6
StJ		75		80		90						90	
StN		80		95			90	100		95	80	80	

Table 9.6: Completed map of flute lesson activity, L17

The activities of musical play (mp), knowledge searching (kn), and narrative play (np) marked the corresponding episodes. The social languages, the activity of musical and pedagogical meaning construction, function within the transition activities. In the example

⁴³ For more details, view the maps of analysis of all lessons in Appendix 6.

above, the activity of narrative play (Apollo and Dionysus) aimed to stimulate and distinguish two characters of musical expression in the section of the *Symphony by Brahms* (see Chapter 8). Episodes 11 (expl/ms+mc) and 12 (ctrl/ms) are typical social languages for knowledge searching and musical play, while episodes 13 (expl and ctrl/ms+mc) and 14 (ctrl/ms) are both social languages within the activity of narrative play. Episodes 15 to 22 show how the social languages within musical play are different. This example of a strengthened Intensity of Interaction emphasizes the diverse kinds of musical knowledge and the multiple means for achieving the goals.

9.4 Intensity of Interaction in light of the results

As a result, the above data-based findings and inferences provide answers to the twofold research question in Chapter 2 (Section 2.6) concerning Intensity of Interaction. The first part of the question asked how Intensity of Interaction demonstrates the musical teaching and learning process, and the other how Intensity of Interaction connects to the features of dialogue and function of an instrumental music lesson.

This chapter has demonstrated how Intensity of Interaction is connected to the sensitive process of dialogic musical and pedagogical problem solving and to the contrasting features that teachers and students deal with in the transitory activities. The distinction of musical play, knowledge searching, and narrative play in the analysis was based on the emerging tensions within the object of each activity. The activities consisted of the dialogic meaning construction, social languages and objects, proximal goals and targets, actions and operations of the lessons. The means of mediation and the content of the lessons structured and added information about the musical and pedagogical problem solving; what was accomplished and how. This complexity presumes anticipation. Anticipation, in terms of qualitative differences within Intensity of Interaction, is explicated by sustained, strengthened, and diminished tendencies of lesson dialogue, together with the meaning construction analyzed within episodes and sequences. The teacher and student anticipate both musically and pedagogically. Their intentions for learning through explanations, controlling, and narratives prepare for the complexity of attaining musical expression. Consequently, through adjusting Intensity of Interaction teachers and students anticipate the transition to the next developmental activity.

At the same time, the process of anticipation activates different possible teaching and learning strategies. In Elliott's (1995, 281) words:

A legitimate part of preparing for the musical practicum involves anticipating alternative teaching-learning strategies based on one's forecasts about impending transactions between particular students and the problems involved in particular musical challenges.

As a whole, the teaching and learning strategies with the activities of musical and pedagogical meaning construction and transitions are intertwined within the scope of Intensity of Interaction.

In the light of the results of this study, articulation and understanding of the dynamic character of musical and pedagogical interactions can, on the one hand, prevent the teachers and students from monotonous and one-sided advocacy of shabby musical idioms. On the other hand, as an outcome, this study has affirmed the conception that openness to the emerging complexity of musical and pedagogical problem solving will increase the expressive possibilities and enrich the musical expression under development. Moreover, this option widens the scope of musical and instrumental teaching and learning, and creates possibilities for development in the field. Against such a background, this study maintains that the use of the construct Intensity of Interaction has practical implications and offers a multi-layered contribution to teacher-student self-observation and teacher development. The next chapter discusses further possible developments of the construct Intensity of Interaction, and provides some concluding remarks on the study.

Chapter 10

Conclusions and evaluation

This study has focused on instrumental teaching and learning from the perspective of the Intensity of Interaction. The construct ‘Intensity of Interaction’ has illuminated the musical and pedagogical meaning construction as a multi-layered process, which has both external and internal, as well as social, cultural, and historical aspects. These aspects in connection to capturing the complex dynamics of the teaching and learning process (e.g. rapid alternation between teacher instruction and student performance, teacher feedback and student response combined with meaning construction and sense making), however, present methodological challenges to researchers. Karlsson and Juslin (2008) state that an important issue is how to describe this process in a manner that provides both overview and depth.

By exploring the teacher-student work through the perspective of Intensity of Interaction, this study has unveiled qualitative features of the musical and pedagogical meaning construction. Chapters 7, 8, and 9 demonstrated how the Intensity of Interaction shifted in the flow of the lessons. This finding is in harmony with how Duke and Simmons (2006) described variations in the pace and intensity of instrumental music lessons.

My analytical interpretation of Intensity of Interaction was based on examinations of the voices of the teachers and students. Their social languages, objects of musical problem solving and combinations of modes of communicative activity (see Chapters 4 and 7), provided the analysis with detailed data concerning the lesson interaction. The analysis was multi-voiced in the sense that the participants were also used as observers through intensity ratings and the stimulated recall interviews. They offered the data composed of personal accounts regarding how teachers and students acted and responded to each other.

As Chapter 9 highlighted, the identification and analysis of the moment-by-moment changes of the Intensity of Interaction during instrumental music lessons were related to managing musical and pedagogical meaning construction and sense making. For example, instead of signifying the musical meanings through integration of proximal targets, the strengthened Intensity of Interaction is connected to managing the tension between sense making in musical play and awareness of musical reality.

The analysis found that teachers and students shifted constantly from one kind of activity to another. This interpretation of transitions means that when the flow of interaction was abundant in a developmental activity, new understandings were prepared to fit into the pre-existing schemas of information in another activity. The process of meaning construction and sense making by teaching and learning strategies, i.e. pedagogical practices, intensified the interaction only up to a limit, a saturation point. These turning points indicated not only mental and physical restraints, or lack of time and energy, but rather internal contradictions that influenced the interaction.

In their own accounts, the teachers and students paid attention to the lack of contact (L4) and eye contact (L5–L8), identification of different motives (L9–11), being present at a moment (L14), and experiences of physical and mental exhaustion (L15; L17; L18–L22). They also described how they were present during the lessons (L5–L8; L12–L14), and how they enjoyed their work together (L1–L3, L10, L12, L14, L16, L17, L18–L22). These kinds of accounts mean that teachers and students indicated motivating reasons for each other in their music making and learning. Consequently, because the dynamic character of the teacher-student reciprocity was recognizable, Intensity of Interaction appears not to be only an analytical and theoretical concept; Intensity of Interaction is intertwined with the everyday work of instrumental lessons.

While the above descriptions condense the process of conceptualizing how Intensity of Interaction functions in the teacher-student work of the instrumental lessons, the following concluding remarks summarize the findings concerning Intensity of Interaction, and evaluate the research process as a whole.

10.1 Conclusions on Intensity of Interaction

My first claim is that identification of Intensity of Interaction and its shifts within instrumental music lessons offer grounds for understanding the nature of teacher-student problem solving. The dynamic interactive process was unique each time. In parallel to improvisation, the structure of the Intensity of Interaction was not fixed. At the same time, the dynamics of lesson interaction was not randomly produced. The Intensity of Interaction of a lesson followed a logic, which emerged from the sense making of the parties. Each stage of the teaching and learning process served a significant purpose. The different characters of

moments in the lesson interaction did not necessarily mean that any moments were pointless or worthless.

Managing the variety of dynamics seems to be central in the musical teaching and learning. The characteristics and features of diminished and strengthened periods of Intensity of Interaction (see Chapter 9) challenge the paradigm which relates efficiency to high teacher intensity and inefficiency to low teacher intensity in instrumental instruction. Rather than focusing on efficient transfer or instruction of knowledge or skills, the concept Intensity of Interaction highlights and values qualitative elements in teacher-student work, which create musical, instrumental, and personal growth and development.

Intensity as a personal attribute is in our minds often connected to efficiency. This study, however, has made a distinction between efficiency and intensity, and moreover between personal and interactive intensity. While searching for interactive intensity, this study has emphasized the attempt to cover and understand both the teacher and the student intensity, to examine the collaborative and shared intensity. Intensity, as this study has maintained, does not equal efficiency in the meaning of good or bad teaching and learning. Rather the varying intensity, high or low, indicates qualitatively different states or moods of interaction.

My second claim is that anticipation is central to activities related to the construct Intensity of Interaction. From a reciprocal perspective, teachers and students of this study “read” each other; their meaning construction aimed to anticipate the reactions of the other person. According to the Deweyan definition (see Chapter 2), thinking in general is understood as anticipation of action. This means that through thinking humans anticipate actions, while meanings are tools of this anticipation. From the Activity Theory perspective tools are dependent on the object of activity (Engeström Y. 1990). The object is a transitional being. In other words, as Section 3.2.3 pointed out previously, the object is both something given and something anticipated. As an outcome of the current analysis, this study regards anticipation as one central motive of music lessons.

The analysis found especially motivating examples of anticipation in episodes with an object of musical re-contextualization. In general, these examples affirm the prospect that such images actively stimulate expectations and preparation for musicians. Presumably, when the time for the actual occasion arrives, they will be musically, mentally, and physically ready for it (Arjas 2002). Therefore, a focus on the Intensity of Interaction points to the balance

between present and future: who I am and what kind of musician I am versus what kind of a musician I will become. Again, this study maintains that these questions do not exclude each other. Rather, the possible tension is jointly solved in teacher-student interaction at each lesson and series of lessons.

My third claim points to inner contradictions and tensions in instrumental teaching and learning. Open and constructive work with tensions in sense making facilitates the process of improving musical expression, growth and development. These tensions, listed in Chapter 9, were jointly accomplished by the teacher and student in musical and pedagogical problem solving. As an outcome, the concept Intensity of Interaction helps to demonstrate the continuity of tension between (1) sense making through a role versus awareness of musical reality, (2) sense making within a narrative versus conventional meanings in music, and (3) musical-pedagogical concepts versus musical-pedagogical experience of reality. These tensions of the inter-supportive transition activities, introduced in Chapter 9 (see Figure 9.1), illuminate the change process as an outcome of relations in which the two points are not exclusive. Put into dialogue, this produces a new perspective from which to examine present actions. Chapter 9 thereby demonstrated how shifts in segments of Intensity of Interaction were related to the transitions of developmental activities, in which the emerging tensions served as the reference in lesson dialogue. Intensity of Interaction can be seen to vary throughout this process of creative problem solving in the teacher-student interaction.

The focus of this study has been on a zone of proximal development within the teacher-student relationship (see Chapter 3). This prospect points to the relevancy of collaborative musical problem solving, in which the student's role as a growing artist and sense maker is to be musically active and innovative. Rather than conflicting with the teacher's expertise, this active role of the student draws attention to the creative achievement of knowledge through collaboration between teacher and student.

The claims above highlight the sensitive nature of the teacher-student interactions and the pragmatic value of the construct Intensity of Interaction in educating musicians and in developing the teacher-student work. Moreover, a musically attractive performance presumes a sense of the Intensity of Interaction in music with other musicians as well as with the audience. Finally, in developing pedagogy, it offers a tool for self-observation and an object for discussions unveiling prospects of change in lesson structure. Using the Intensity of

Interaction as an object of discussion within pedagogy also means the possibility of elaborating more reflective teaching and learning contexts: group lessons, peer learning, and combinations of musical play, narrative play, role play, and knowledge searching.

10.2 Evaluation of the study

As a starting point, I was interested in intensive teaching and learning processes: how they function and how to describe them. In addition to the “how” questions concerning the musical and pedagogical meaning construction, the questions of “why” also were of relevance. The motive of developing musical expression and instrumental techniques interested me. By focusing on musical and pedagogical activity, this study has succeeded in unveiling and articulating some of the key elements of the collaborative teacher-student work in instrumental music lessons. At the same time, by maintaining a focus on thorough analysis of the activity in question, the applied methods have also ensured respect for the personal privacy of the participants.

The analysis of musical and pedagogical meaning construction focused on the content of the dialogue and actions of participants within the instrumental lesson context. In the analysis, contextualized speech and actions framed the musical teaching and learning activity. In parallel with R. Engeström’s (1999b) study, the basic question of this research project has concerned the relationship between the analysis of object oriented activity and subjectively constructed meanings. On the one hand, the notion of activity explains the structure of musical teaching and learning and takes into consideration the cultural, historical, and social context. On the other hand, it aims to evade the mechanistic and deterministic paradigm. The analytical methods of this study were drawn from the Bakhtinian theory of speech within the framework of activity, elaborated in R. Engeström’s study. Thus, the instrumental teaching and learning activity became the purpose of interaction between the teachers and students. The adaptation of the Method of Voices included naming the social languages aroused in the instrumental teaching and learning. Through their individual voices subjects evoked the social languages to produce the actions of the instrumental lesson.

As Chapter 9 demonstrated, the findings based on the social languages of the instrumental lessons guided to frame sense making activity as transitions between activities of musical or schematic role play, narrative learning, and knowledge inquiring. This analytical framework

enabled generalizations concerning the meaning construction and sense making in relation to Intensity of Interaction. As a result of the analysis and the interpretative framework, this study was able to create and devise visual and symbolic charts, which captured all the analyzed information from each lesson.

The present research aimed to cover what Silverman (2005, 229–232) points to as four aspects in assessing qualitative research: (1) building useful theories, (2) using a self-critical approach, (3) thinking about appropriate research methods, and (4) making a practical contribution. This means, according to Silverman, how far the research demonstrates “the use of previous concepts and theories, and establishing the theoretical contribution of one’s efforts” (Silverman 2005, 229).

10.2.1 Assessing useful theories

A novel approach to the research in instrumental teaching and learning, which this study has discussed and applied, is the empirical use of pragmatist music education philosophy combined with methods within Activity Theory. The combination of these approaches has provided the theoretical framework for the research methods elaborated and applied in this study. The recent developments of both approaches have enabled the combination of understanding the collaborative teacher-student work in instrumental lessons and research methodology of this phenomenon in the empirical examination of Intensity of Interaction. The pragmatist music education philosophy has provided conceptions and terms concerning experienced events, values, value systems in music and music education. Moreover, in specifying the objects of the instrumental lessons and the modes of communicative activity, this study has benefited from research within pragmatist music education philosophy.

Concepts and theories within the framework of Activity Theory, which is relatively new to research in music (see Welch 2007; Johansson 2008; Burnard & Younker 2008), have opened possibilities for investigating the teacher-student work. Activity Theory offered the theoretical and methodological tools in order to rethink analytical frameworks for this qualitative study and respective methods for carrying out a multi-layered study.

10.2.2 Assessing the self-critical approach

For Kvale (1995), validity in qualitative research has three distinctions: validity as quality of craftsmanship, communicative validity, and pragmatic validity. In the case of this study, craftsmanship has meant checking, questioning and theorizing different phases of the practical processes of the research in detail. Although, the methods for analysing meanings had a portion of theoretical thinking and core presumptions, the instruments of the research that directed the analysis were created during the process of investigation. Consequently, this study elaborated a tool of intensity ratings as a method for gathering teacher student perceptions of the shared work.

The decisions of how to proceed in exploring the Intensity of Interaction and in developing the theoretical argumentation were open to a broad community of researchers during this process. The discussion also included the participants of the explored lessons and other interested parties. This can be seen as what Kvale (1995) calls communicative validity. The communicative validity consisted of the possibility to share the methods and results with colleagues and the research community. The participants also took part in reflecting on the findings. This perspective is important, since in this way research becomes part of the social construction of reality (R. Engeström 1999b; Davidson 1997). Accordingly, frequent contact with a research group in the Centre of Activity Theory and Developmental Work at University of Helsinki, as well as with the doctoral research seminar in music education at the Sibelius Academy was crucial for my thinking, interpretations and for proceeding with this study.

The examination of the 22 lessons was by nature an experimental exploration in the sense that it provided the opportunity in the field to exercise and deploy the adapted and elaborated methods of analysis and description. This development and deployment of methods in the current study increased pragmatic validity. Kvale (1995) emphasizes pragmatic validity as a counteraction to the circle of interpretation that social constructionists have created. For both the validity and reliability of this study it was crucial to gather information systematically, and in a way that enabled the assessment of the analysis.

One crucial aspect of validating the methodology used in this study is consideration of how well the Method of Voices adapts to different domains of research. The Method of Voices, originally used for clinical problem solving was indeed transferred into the seemingly

quite different context of music and, more precisely, instrumental music lessons. The setting of teacher-student dialogue, however, can be seen to have similarities with doctor-patient dialogue. They both represent activities of highly specialized expertise on the object, which are knowledge-laden as well as emergent and fluid in nature, and which have a similar cultural-historical expert-novice relationship. Moreover, as previous research in the UK and Nordic countries has pointed out (e.g. R. Engeström 1999a; 1999b; Rostvall and West 2001; Tuovila 2003; Gaunt 2006), interactions within both domains are characterized by dialogical asymmetry, in which the teacher or doctor possesses, and delivers, knowledge within the tradition. With the help of the Method of Voices, this report provided analysis in the form of sketch maps and graphs of all the lessons (see Appendix 6). While intensity ratings illustrated interpretive work on intensity by the participants, the Voice Analysis extended the scope with contents, musical and pedagogical means and proximal goals of pedagogical activity.

10.2.3 Assessing appropriate research methods

This study gathered data through interactive processes and events using video and audio recordings, intensity ratings, stimulated recall interviews, participatory observations, and field notes. The collected data provided a detailed description of lesson interaction in the teacher-student work. Through participating in the stimulated recall interviews, the subjects of this study were able to confirm the correctness of the transcript. As is typical for qualitative research, the use of multiple data sources, the transparency in method and robust design served to enhance both integrity and reliability (Kvale, 1995).

The purpose of the data collection process was to gather information of the teacher-student work in its typical form. However, their interaction was not the same as natural because of the recording equipment and someone watching and listening. As expected, already the awareness of the presence of a third party would have somewhat influenced the teacher-student work.

For example, the amount or moments of diminished Intensity of Interaction episodes may have been fewer because of the video taping. Still, the participants agreed not to question any of their actions during the lessons because of the recordings or the recording methods. Working in the lessons with the camera, the observer, with the concept of intensity in mind, might have significantly influenced the entire approach. The students and teachers did

comment on the fact that the camera and the research context influenced the lessons. They did not “fool around”, or “sit down and talk nonsense for a while” (according to comments in stimulated recall interviews).

Employing different concepts and units of analysis to the same empirical material could also be regarded as comprehensive data treatment (Silverman 2005, 214). As described in Section 5.4.2, the different forms of the units of data-based analysis served different purposes in the research. In parallel with previous reports, the musical and pedagogical meaning construction in the lessons of this study unfolded in micro to macro layers. However, the bias of these layers might be a problem for observation and analysis as Duke (1999, 19) described:

To observe teaching from the perspective of the lesson or the class or the rehearsal is too broad a focus, because it is nearly impossible to discriminate among events of varying importance. To observe from the more limited perspective of the precise content of each verbalization of the apparent meaning of each expression, for example, is too narrow, because it ignores the connections among related events—the student behavior to which the teacher is responding and is hoping to influence.

Duke’s rehearsal frame model focuses on performance goals as the organizing principle. As a solution for this study, the episodic, sequential, and segmental units proved to be appropriate for the purpose of capturing the dynamic shifts of the teacher-student interaction, as a whole and in detail, anchored in instructional activity.

10.2.4 Assessing of the results

Demonstrations of how the research results will help practitioners – teachers, students, music education directors, instructors, and researchers – enable a research study to make a practical contribution (Silverman 2005). Respectively, this study meets the two major aspects which Karlsson and Juslin (2008) highlight as key indicators of the value of research on instrumental teaching and learning. The first aspect is contribution to the development of novel approaches to musical and pedagogical thought and practice. The second aspect is that research of this kind should help to describe the nature of current teaching and learning, and to express and reveal both its advantages and disadvantages.

For research, Intensity of Interaction provides a uniquely useful lens for understanding the actions of instrumental lessons (e.g. objects and modes of communicative activity) both in detail and as a whole. This lens is based on the notions of mediation and situatedness among

intentions and expectations that construct the lesson. As an object of research, Intensity of Interaction has stimulated and enabled the elaboration and application of new methods in examining instrumental music education and practice.

Novel to the practice, the everyday work in instrumental lessons, is the application of Intensity of Interaction, which offers a joint teacher-student perspective to the possibilities of teaching and learning strategies. This study argues that by viewing their work through Intensity of Interaction, teachers and students uncover musical, social, and contextual obstacles as well as options in the lessons and in developing the instrumental teaching and learning. This understanding, as this research argues, will stimulate reflections, create practical solutions, and encourage exploration of new modes and contexts of music making and communication.

10.3 Implications for future studies

The results of this study raise a number of issues related to Intensity of Interaction in music education that deserve further research and discussion. This study was an initial step in systematically exploring the dynamic character of communication in instrumental music lessons in the framework and tools of Activity Theory. Future research is recommended to extend the results found in this study and to increase awareness concerning the shared meaning construction and problem solving of instrumental lessons.

One line of interest based on this study, is to relate the processes of instrumental music lessons to improvisation. For example, the few occurrences of musical re-contextualization as an object of the examined lessons in this study (L17, L18, and L22) emphasize and prospect the creative possibilities of combining musical and pedagogical elements with interactive methods and drama. As a means for musical interaction and experiencing, improvisation offers, as Johansson (2008) showed in her investigation of organ improvisation, a rich field of research within the framework of Activity Theory.

As an overall outcome, this study argues that presenting and examining sense making as a criterion for Intensity of Interaction within musical and pedagogical problem solving provides grounds for future studies within music education. In light of the results of this study, along with the developed tools and perspectives of Activity Theory, several topics now appear to warrant further study: (1) exploring the activity of practicing through its moment-to-moment

intensity connected to the intensity of long term periods of work, (2) the Intensity of Interaction within different forms and strategies of instrumental teaching and learning like master-classes, group and peer tuition, (3) exploring teacher development from the perspective of Intensity of Interaction and by means of it, (4) the Intensity of Interaction within personal study plan, weekly and monthly schedule connected to learners' experiences and perspectives in musical learning, (5) Intensity of Interaction connected to the application of expansive learning cycle in developing and organizing instrumental music education in institutions and cultural organizations, (6) Intensity of Interaction in musical performances. These topics are intertwined and related strongly to each other. However, each theme deserves detailed articulation from the perspective of Intensity of Interaction. As an implication, focusing on these topics in the light of the present results would provide new openings for the research of and practice in instrumental music pedagogy.

10.4 Contributions of research on Intensity of Interaction

Reflections in and on the processes of music education and instrumental teaching and learning have often been rare, one-sided, within narrow framework, and characterized by ambiguity (Gaunt 2006). Therefore, this research has introduced and examined Intensity of Interaction as a constituent means in understanding the dynamic character of instrumental teacher-student work; not only in order to demonstrate its advantages and disadvantages but as a tool for examining, elaborating, and expanding the interactive processes of instrumental music lessons: a tool for disclosing these pedagogical situations in cultural and musical contexts.

Reflections in this study reached, however, a hypothesis that internal contradictions open zones of proximal development in musical teaching and learning when the contradictions are brought in front and articulated clearly. Such articulation becomes crucial when the complexity of the musical and pedagogical work process increases. The process of teaching and learning may reach a point beyond which it cannot continue without searching for solutions to the emerging tensions. One option is to neglect the tensions and change direction of the teaching and learning process for the time being. The other option is to face the emerging emotions and tensions through, for example, reflection; reflection-in-action and reflection-on-action (Schön 1987).

While the analysis articulated inherent tensions and contradictions within activities of an instrumental lesson, these results may facilitate possible ZPD of the sociocultural activity of instrumental teaching and learning. The present examples of internal contradictions may possibly form starting points for developments in the teacher-student work. This includes the possibility for developments of the entire activity system of instrumental teaching and learning. In the context of Western classical music, the developments can be formulated at (1) personal, (2) lesson, and (3) institutional levels.

At the personal level (1), the developments concern the collaboration and communication of the music teacher and learner. Formulated in the daily life, it means to improve teaching and learning by, instead of telling the student, creating musical and non-verbal means of communication and allowing the student determine their own answers. For both teacher and student, the perspectives of development of collaboration could also mean, for example, increased use of self- and peer assessment, and particularly empowerment for the student as a self-regulating musician, who takes initiatives to musical expression during lessons and rehearsing. These emphases value the participants as learners and artists discovering, exploring and experiencing new and old in music, instrumental technique, and musical expression.

At the lesson level (2), the developments of collaborate practice may support the musical and instrumental tradition or develop new musical practices. Depending on the desired musical and pedagogical outcomes, the instrumental lesson activity may benefit from new working methods and means including, for example, the readjusted time schedules, peer and group work, planned use of reflections, use of video and audio recording and listening devices, internet, and video counseling.

As the results of this study suggest, the identification and acknowledgement within relations of the objects and modes of communicative activity, guide and effectively balance the lesson activity (Sections 7.2 to 7.5). From the perspective of developing the instrumental teaching and learning activity by combinations of objects and modes, the object of musical re-contextualizing (Section 4.6) offers pedagogical opportunities, for example, to enhance the use of improvisation and ensemble work. Such elaboration of contexts may also be expanded to include various music genres from outside the European art music tradition. These

collaborative teaching and learning methods in music lessons may also even include cooperation in combination with other kinds of musical instruments in music education.

Such developments involve elaborations in the institutional level (3) as well. For the development, the institution may have to reorganize or combine units of teaching and learning. At best, by so doing the institute may gain resources based on the preserved economy. The successful accomplishments of these developments, however, deserve thorough consideration. The reconsideration of the division of time and labor for instrumental teaching and learning, the applied methods of assessment and grading, may cause tensions between emphases within the desired learning outcomes and even the notion of musical quality.

In the context of musical studies, to highlight the value of musical and instrumental competence may create tensions with the application of music in society. These aspects may benefit from each other. However, accomplished excellence in either emphasis is a time consuming practice with special interests, which may not be achieved at the same time without a conflict. Quality of instrumental technique and musical expression is regarded as an indispensable value to which instrumental teachers devote themselves, and toward which the students are often expected to aim. This may, however, as particularly in vocational studies, create tensions with the emphasis on the application of the attained musical competence.

As an outcome, the tools for conceptualizing, analyzing and contextualizing the teacher-student work in instrumental music lessons enable developmental processes both within the musical and pedagogical meaning construction and at administrative levels. If and when teachers, students, and directors attempt to accomplish development together, the results of this study offer an option and an approach for such processes. For instance, the results allude to and offer tools for the first stage of Engeström's expansive learning cycle (Engeström Y. 1987; see Chapter 3). Interventions and new directions can be traced and designed by the communities of practice using available examples of Change laboratory (Virkkunen et al 1997), Learning Studios (Lambert 1999), and Culture Laboratory (Teräs 2008).

Such attempts to enhance collaborative approaches for development in instrumental teaching and learning and in music education in general involve and necessitate further research, and joint interventions that offer relevant information and stimulate the instrumental music education community. However, the transfer of any research findings to the practice of

music education, particularly of instrumental teaching and learning, comprises a major challenge. As an option for unveiling and bridging relevant ideas and elaborations within communities of instrumental teaching and learning and research on music education, Intensity of Interaction offers a focus, a holistic perspective with detailed insights into instrumental lessons.

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Appendices

Appendix 1: Content and Description of the recorded lessons

Appendix 2: Time schedule of recordings and stimulated recall interviews

Appendix 3: Transcript of lesson interaction

Appendix 4: Social languages in episodes

Appendix 5: Intensity of Interaction in segments and sequences of episodes

Appendix 6: Maps of lesson interaction

Appendix 7: Abbreviations used in the analysis

Appendix 8: Definitions of terms within Activity Theory

Appendix 9: Conversations with parents

Appendix 1: Content and description of the recorded lessons

Lesson	Recordings	Dur (min)	Age of student	Instr	Format	Teach	Stud	Contents
L1	16.9.2004	22	13					Bow exercises: sautille; Böhm: Moto Perpetuo; Kuula: Folk songs.
L2	30.9.2004	21	13	VI	one-to-one	Female	Female	Bow exercise: staccato; Telemann: sonata
L3	9.12.2004	23	13					
L4	5.5.2005	24	14					
L5	19.11.2004	30	16					
L6	16.4.2005	56	16					
L7	1.2.2006	35	17	VI	one-to-one	Female	Female	
L8	13.4.2006	51	17					
L9	12.12.2006	30	14					
L10	19.12.2006	26	14	VI	one-to-one	Male	Male	
L11	23.1.2007	40	14					
L12	28.9.2006	37	22				Female	Double stops: Wieniawsky Polonaise in A; Beethoven: Sonata I and II mov.
L13	2.10.2006	7	6	VI	one-to-one	Female	Male	Twinkle, twinkle little star
L14	12.10.2006	41	21				Female	Scales: etude: Telemann: solo sonata
L15	4.12.2006	55	24		one-to-one	Female	Female	Mussorsky: songs
L16	4.12.2006	37	23	Voc	one-to-one	Female	Female	Voice exercises: Kela: Christmas song
L17	6.2.2007	62	21/20	FI	pair	Female	Female/ Male	Warming up exercises; Orchestra solos in Brahms 4th, Bizet Carmen; Debussy Pinaud, Dvořák scherzo, Rossini Wilhelm Tell
L18	28.1.2006	16			group (6)			Little Goldfish; Snail goes shopping; Twinkle; Cuckoo; Moon over the ruins
L19	4.2.2006	32			group (4)			Sun song; Little goldfish; Twinkle/ pikku pupu; Snail; Twinkle/ porkkana;
L20	18.3.2006	26	4.5	Vcl	group (5)	Female	Male	Schubert: Berceuse; French folk song; Cuckoo; Spring song; Twinkle/ pikku pupu
L21	1.4.2006	24			group (7)			Twinkle; French folk song; Trip-Top; Snail; Pii Paa Fire car; Snowman; Twinkle/ pikku pupu
L22	22.4.2006	24			group (6)			Twinkle; Cowboys and Indians; Happy birthday; French; Trip-Top

Appendix 2: Time schedule of recordings and stimulated recall interviews

Lesson	Recording		Dates of stimulated recall interviews		
	Date	Duration	Teacher	Student	Observer
L1	16.9.04	0:22:04	10.10.04	1.12.06	12.12.06
L2	30.9.04	0:20:38	10.10.04	1.12.06	12.12.06
L3	9.12.04	0:20:42	5.12.06	16.2.07	12.12.06
L4	5.5.06	0:27:17	17.5.06	16.2.07	12.12.06
L5	19.11.04	0:27:31		25.8.07	15.10.07
L6	16.4.05	0:53:30	12.12.06	26.5.07	
L7	1.2.06	0:32:42		25.8.07	18.8.07
L8	13.4.06	0:50:25	18.12.06	25.8.07	18.8.07
L9	12.12.06	0:29:36	21.3.07	21.3.07	
L10	19.12.06	0:26:49	29.3.07	29.3.07	
L11	23.1.07	0:39:29	28.5.07	28.5.07	

Lesson	Date	Duration	Teacher	Student	Observer	Observer
L12	28.9.06	0:39:29	7.4.07	21.3.07	21.3.07	
L13	2.10.06	0:06:29	7.4.07		21.3.07	21.3.07
L14	12.10.06	0:42:06	7.4.07	28.3.07	28.3.07	

Lesson	Date	Duration	Teacher	Student	Observer	Observer	T/St/St/ Obs
L15	4.12.06	0:54:30	12.12.06	25.1.07	25.1.07	7.2.07	9.2.2007
L16	4.12.06	0:37:41	12.12.06	25.1.07	25.1.07	7.2.07	9.2.2007

Lesson	Date	Duration	Teacher	Parents	Observer	Observer
L17	6.2.07	1:01:06	13.3.07		13.3.07	
			20.3.07		20.3.07	
			31.5.07			31.5.07
L18	28.1.06	0:16:56	20.3.07	27.5.06	20.3.07	20.3.07
L19	4.2.06	0:32:42	20.3.07	27.5.06	20.3.07	20.3.07
L20	18.3.06	0:25:28	10.5.08	27.5.06		
L21	1.4.06	0:23:09	20.3.07	27.5.06	20.3.07	20.3.07
L22	22.4.06	0:22:58	12.10.07	27.5.06	12.10.07	12.10.07

Appendix 3 Extract of a Transcript of lesson interaction in the beginning of L12

Episode	Dur in sec	Teacher	Teacher	IR% T	IR% St	IR% obs	Student	Student
1	70	Otas vielä. (pariaänet epäpuhtaita) [Take again. The double stops are out of tune.]	ctrl/ har, int, tch/ mship				ctrl/ har, int, tch/ mship	Soittaa [plays] (kokeilee kaksi kertaa uudestaan)
		Ajattele, et se tulee. Ensin iso väli ja sitten pieni väli. [Think it is coming. First big then small grip.]		70				[Tries twi times.] (kokeilee vielä ja onnistuu) [Tries again successfully]
2	27	Just. [Yes. (St continues playing.) Hyvä. Sit vaan aattele, aina kun lähdet. Kun nyt lähtee työntöjousella, niin aattele et sä. [Good. Always when you start, think. When you start up-bow, relax.] oot ihan rento. (painaa olkapäätään alas) Ja aattele, et sä lähet tekemään niin kun näin päin sitä. (Näyttää kaaren kädellään ilmaan). [Relax, (pushin her sholder down). And think that you start doing it this way. (shows a curve with her hand in the air).] Jousella mieluummin kuin näin. (Näyttää puristuksen ylhäältä alas) [With the bow rather than like this. (Shows squeezing from up to down)] Joo. Mee eteenpäin. Se oli parempi nyt. Nyt sit vaan enää...Korjaa viides ja kuudes. [Yes go on. It was much better now. Now only this. Correct fifth and sixth..]	xpl/ tch, body/ mship			80	ctrl/ har, int, tch/ mship	
		Joo. (kävelee opp:n luo) Sori. Soita se, viel toi. (näyttää nuotista) [Yes, (walks to the student.) Sorry, play it, and this (shows from the music).] Nyt aattele ihan pieni diminuendo siihen loppuun. [Now think a small diminuendo to the end] Eli ihan pieni diminuendo...ja sit lähet uudella impulssilla. (ottaa K:n jousesta kiinni ja näyttää) [Only a small diminuendo...and then take off with a new impulse. (holds the student's bow and shows).] Nyt taas diminuendo ja alhaalta. Just. [Now diminuendo again from below.] Nyt taas diminuendo ja et lähet ihan niin kun (soittaa malliksi työntöjousen) Niin mä haluun, ettet sä niinku lähe tästä asennosta. (näyttää jännittyneen olkapään) [Diminuendo again and start as if (plays up-bow). Don't start from this position (shows a stif sholder).] vaan et sä...(soittaa) [Rather like this (plays)]	ctrl/ int, dyn, art, tch, body/ mship			70	ctrl/ int, dyn, art, tch, body/ mship	Hmmh. Niin, aivan. (jatkaa soittoa) [Yes, ok (goes on playing).] Okei. (soittaa).[Ok, (plays).] Joo. (soittaa) [Yes (plays)]
3	137	Just! [Yes!] Ja taas. ([And again.]						
		Joo ihan just noin eli kevennä sinne ylös. [Just like that, lighten when you go up] Just! [Yes!]				60	80	Aa...(kokeilee) [Ooh, (tries)] (jatkaa soittoa) (Continues playing) (Jatkaa ottaen joitakin kulkuja uudestaan). (Continues and repeats passages) (jatkaa) (continues)
								(jatkaa soittoa) (Continues playing)

Appendix 4: Social languages in episodes

Instr	Lesson	Dur	Epis	Number of Social languages																		all	t	stud								
				xpl/ mship		xpl/ mst+ mc		xpl/ mcal		chl/ mship		c/ mst+ mc		chl/ mcal		nar/ ms		n/ ms+ mc		nar/ mc					xpl/ mc		play		lfr			
				T	St	T	St	T	St	T	St	T	St	T	St	T	St	T	St	T	St				T	St	T	St	T	St		
	L1	0:22:04	21	5	2	1	0	0	0	13	14	2	5	0	0											42	21	21				
	L2	0:20:38	26	3	2	3	2	2	0	18	20	0	2													52	26	26				
	L3	0:20:42	20	5	3	1	0	1	0	7	8	5	7	0	0	1	0									38	20	18				
	L4	0:27:17	21	4	0	0	0	1	0	13	12	2	7	1	0											40	21	19				
	L5	0:27:31	26	7	6	4	4	5	5	8	9	2	2	0	0											52	26	26				
	L6	0:50:06	56	15	10	8	6	2	1	18	19	7	13	1	2	0	0	4	3	0	0					110	55	55				
	L7	0:32:42	33	6	7	2	0	2	0	13	15	7	8	0	0	0	1	0	2	3						66	33	33				
	L8	0:50:25	44	16	17	6	1	2	3	13	14	5	7	1	1	0										87	43	44				
	L9	0:29:36	27	8	8	1	1	8	8	10	10	0	0	0	0											54	27	27				
	L10	0:26:49	29	7	7	2	2	0	0	8	8	11	10	1	1	0	1									58	29	29				
	L11	0:39:29	48	11	8	2	2	1	1	28	30	3	3	2	2											94	47	47				
	L12	0:39:29	27	7	4	5	3	4	4	8	12	3	4	0	0											54	27	27				
	L13	0:06:29	12	3	2	1	1	0	0	6	6	0	1	0	0	2	0	0	0	0						24	12	12				
	L14	0:42:06	41	8	8	10	7	4	3	14	11	5	11	0	1											82	41	41				
	L15	0:54:30	53	18	18	16	16	1	1	2	2	13	13	0	0	0	1	0	0	1						104	51	53				
	L16	0:37:41	54	16	14	6	7	4	4	16	16	8	9	1	2	1	0	0	0	0						108	54	54				
	L17	1:01:06	60	19	12	9	5	7	7	14	17	8	15	2	2	0	0	0	0	1	1					119	60	59				
	L18	0:16:56	38	6	4	1	0	2	0	23	26	2	3	0	3	1	0	0	2	1	1					76	39	39				
	L19	0:32:42	49	4	4	0	0	10	9	13	13	12	12	2	2	5	5	0	0	2	3	0	0			98	49	49				
	L20	0:25:28	38	6	2	2	1	3	2	8	12	11	13	0	1	6	6	2	1	0	0	0				76	40	40				
	L21	0:23:09	42	4	3	4	3	8	6	11	13	12	13	1	3	1	0	1	1	0	0	0				84	44	44				
	L22	0:22:58	40	11	5	3	2	4	4	4	11	13	13	0	0	1	0	3	3	0	0	0	1			80	40	40				
		11:49:53	805	189	146	87	63	71	58	268	298	133	172	11	19	17	16	13	8	6	8	2	2	1	1	0	5	2	2	1598	805	803

Appendix 5

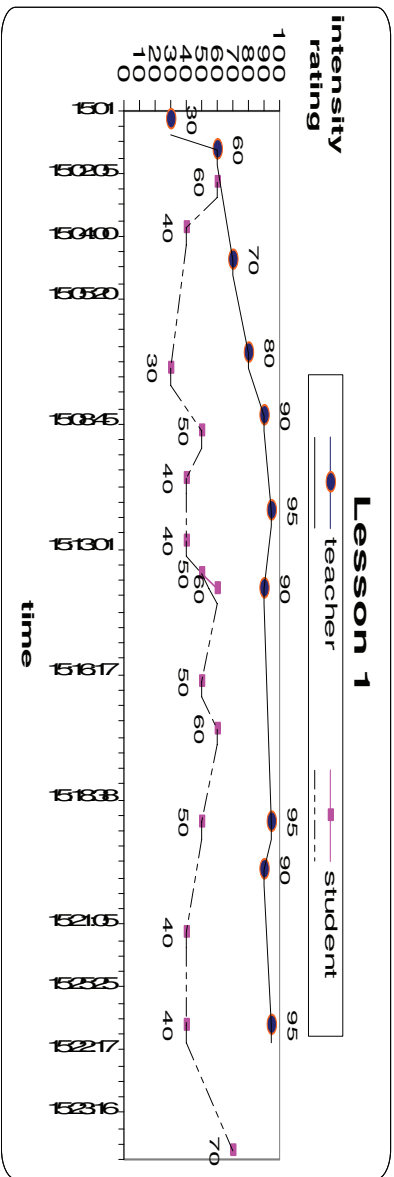
Intensity of Interaction in segments and sequences of episodes

Lesson	sg 1	ep/seq	sg 2	ep/seq	sg 3	ep/seq	sg 4	ep/seq	sg 5	ep/seq	sg 6	ep/seq	sg 7	ep/seq
L1	sus	4+2	str	3+2	sus	2+3+3+2								
L2	sus	2+3	sus	1+4	dec	2+1+3+4+2+4								
L3	sus	3+4	sus	2+2+3+4+2										
L4	sus	4+3	dec	2+2+2+3+2+3										
L5	sus	3+3+4+3+2	sus	3+3+5										
L6	sus	4+2+2	dec	2+3+5+2	str	4+2	dec	3+2+2+3+3	str	3+3+3+2+3+3				
L7	sus	4+2	sus	2+2+3	str	4+3+2+4+4+3								
L8	dec	1+5+2	sus	2+3	dec	2+2+2	str	4+4+3+3+2+2+3+2+2						
L9	str	2+3+2	sus	2+2+5	str	4+2+2+0	dec	3						
L10	str	3+2	dec	3+4	str	4+4+3+1	sus	3+2						
L11	sus	3+3+3+3	sus	4+3+4+5+4	sus	4+2+3+4	sus	3						
L12	dec	2+2	str	2+4	sus	3+2+1+2	sus	2+1+2+2	dec	2				
L13	str	2	sus	3	dec	2+2	str	3						
L14	str	3+3+3+2	dec	2+2	str	3+3+2	str	3+2+4	sus	2+2	dec	3+2		
L15	sus	1+3+2+1+5	dec	2+5	dec	4+2+2+3+3+3	sus	2+2+3+3+4	sus	3				
L16	str	2+2+4+3	sus	3+4+3+5	str	3+3+2+3	dec	4+3+3+3+2+2						
L17	str	3+2+2+2	str	3+3+2+5	dec	3+5	sus	3	dec	3+3+3	str	4+5+4	sus	3+2
L18	sus	5+2	sus	2+3	str	2+3+3	str	2+3	sus	4+3	str	2+2+2		
L19	sus	5+3+3+2	str	3+5+2+3	sus	3+2+4+3	dec	3+2+0	sus	3+3				
L20	sus	3+5+4	dec	4+3+2+5	sus	3+2+3	str	2+2						
L21	str	3+3+2+2+3	sus	3	sus	2+2+5+2	str	2+2+4+3+4						
L22	dec	2+2	str	3+2+2+5	str	3+2+3	str	2+2+2	dec	2+4	sus	2+2		
	22	184/ 66	22	203/ 67	19	194/ 70	16	137/ 52	8	54/ 19	4	28/ 10	1	5/ 2

Appendix 6

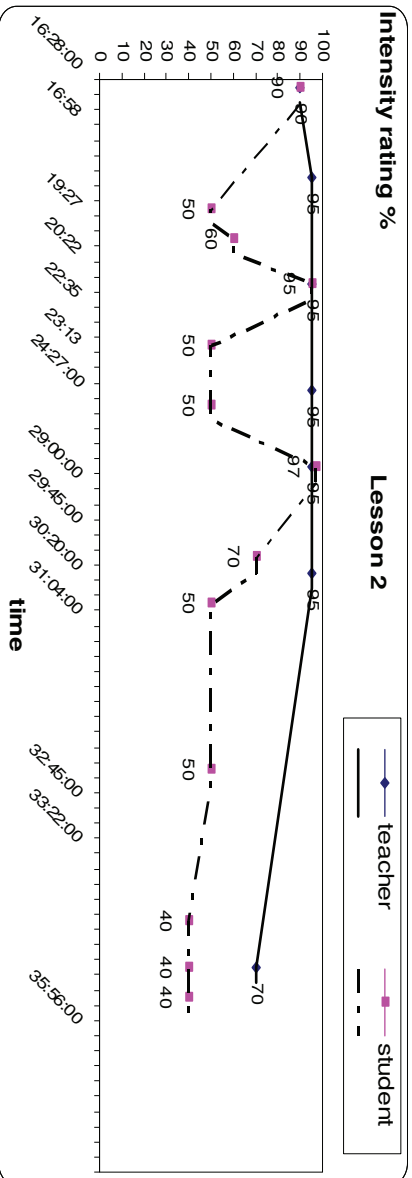
Lesson 1

L1	sg 1	sustained				sg 2	strengthened	clear	sg 3	sustained											
	Sautillle excercises	xpl/har/ms	xpl/rfp/ms	ctrl/prf/snd	ctrl/tch/snd	ctrl/tch/bd	ctrl/prf/bd	xpl/bd/tch	xpl/prf/rfp/mc+	ctrl/dvn/snd	xpl/prf/har	ctrl/emo/ima	ctrl/bd/tch/ima	ctrl/emo/ima	ctrl/emo/ima	ctrl/emo/ima	ctrl/rfp/ima	ctrl/rfp/tch/art	ctrl/tch/prf/bd		
Act	kn	kn	mp	kn	kn	mp	kn	kn	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	
Stud	ctrl/ms	xpl/tch/rfp/ms	ctrl/rfp/ms	ctrl/prf/snd/tch/rfp/ms	Kn	ctrl/tch/bd/rfp/snd/ima/ms	ctrl/prf/bd/tch/ima/ms	kn	mp	ctrl/dvn/snd/rfp/prf/ms	ctrl/emo/ima/snd/pvl/ms	ctrl/emo/bd/tch/ima/art/ms	mp	ctrl/emo/ima/rfp/ms+	mp	ctrl/emo/ms+	mp	ctrl/tch/art/ms	mp	ctrl/tch/prf/bd/tch/ms	
episode	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
dur	7	58	28	107	51	84	150	47	88	76	61	32	66	55	45	63	67	25	79	69	66
T	30	60	70	40		80	95	40	40	50	60	50	60	60	50	95	90		40	95	
St																					
seq		Knowledge inquiring																			



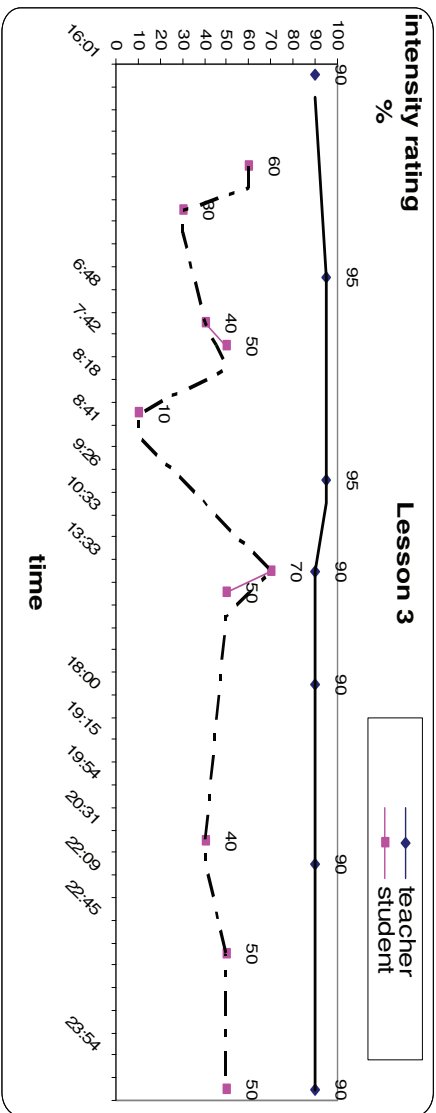
Lesson 2

L2	sq 1	sustained	sq 2	sustained	sq 3	declining	How could we make the hills cleaner																				
	Saullie exercises		Perpetum Mobile		Kuula: Folk sing																						
	xpl/ mc	ctrl/ tch, bd/ ms	xpl/ rfp, bd/ ms	ctrl/ rfp, ina, bd/ ms	xpl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ tch, ens, tch, art/ ms	ctrl/ tch, ina, ms	ctrl/ rfp, art/ ms	ctrl/ rfp, art/ ms	ctrl/ rfp, art/ ms	ctrl/ rfp, art/ ms	ctrl/ rfp, art/ ms	ctrl/ rfp, art/ ms	ctrl/ rfp, art/ ms	ctrl/ rfp, art/ ms	ctrl/ rfp, art/ ms	ctrl/ rfp, art/ ms	ctrl/ rfp, art/ ms	ctrl/ rfp, art/ ms	ctrl/ rfp, art/ ms						
teach																											
Act	mp	kn	mp	kn	mp	kn	mp	kn	mp	kn	mp	kn	mp	kn	mp	kn	mp	kn	mp	kn	mp						
stud	ctrl/ prf/ ms	ctrl/ tch, bd/ ms	ctrl/ rfp, ina, bd/ ms	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+	ctrl/ rfp, ina, ms+						
episode	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
dur	30	64	85	23	19	87	32	40	63	32	64	36	105	46	72	32	43	63	35	9	35	58	51	29	50	35	
T int	90	95	95			95	95				95		95		95												
St int	90	50	60			95	50				50		50		97	70	50										
seq	mplay	Knowledge Inq			mplay					mplay																	



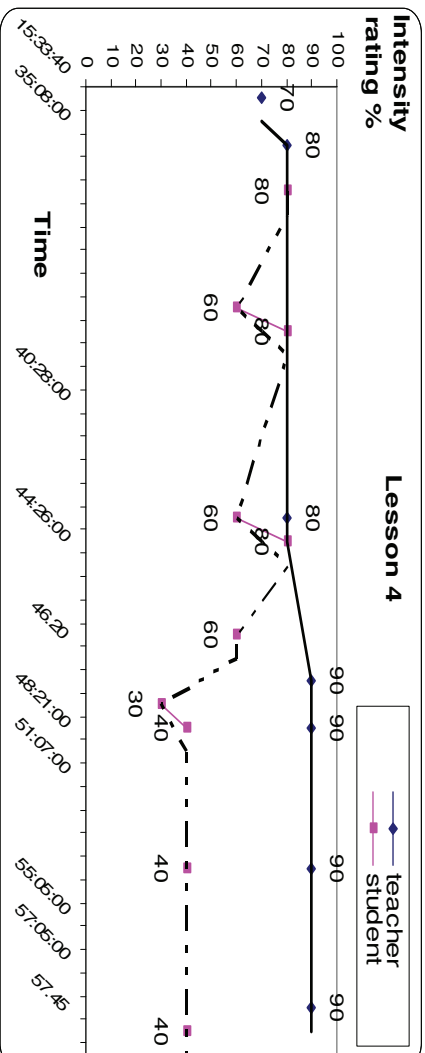
Lesson 3

	sq 1							sq 2												
	Kuula: Folk songs							Perpetuum Mobile, Sauliie												
L3	xpl/ prf/ mc	ctrl/ prf/ tnp, ima, tch, snd/ ms	xpl/ prf/ emo ima, tch, rtp/ ms	xpl/ emo ima rtp, ens/ ms	ctrl/ rpi, tch, rtp/ ms	xpl/ har. int, tch, rtp/ ms	xpl/ ms	xpl/ prf, tch, bd/ mc+ ms	ctrl/ rtp, ima, ina/ ms	nar/ rtp, ima, bd, tch, ens/ ms	ctrl/ bd, tch, rtp, ens/ ms	ctrl/ snd, tch, ima/ ms	ctrl/ ima, tch, ens, rtp/ ms+	ctrl/ dyn, tch, ms+	ctrl/ tch, ms+ mc	ctrl/ tch, rtp, snd/ ms	ctrl/ ima, rtp, ms+ mc	ctrl/ rtp, tch, snd/ ms+	ctrl/ rtp, tch, ms+	xpl/ prf, emo/ ms
Act	ctrl/ prf/ mc+	mp	kn	kn	kn	kn	irr	ctrl/ bd/ tch, prf/ ms+	mp	kn	mp	ctrl/ snd, tch/ ms	ctrl/ ima, tch, ens, rtp/ ms+	kn	mp	mp	mp	mp	mp	mp
stud	mc+ ms	tnp, ima, tch, snd/ ms	emo ima, rtp, ens/ ms	ima, rtp, ens/ ms	rpi, int, tch, rtp/ ms			ctrl/ bd/ tch, prf/ ms+	bd, tch, rtp, ens/ ms	bd, tch, rtp, ens/ ms	bd, tch, rtp, ens/ ms	bd, tch, rtp, ens/ ms	ctrl/ ima, tch, ens, rtp/ ms+	ctrl/ dyn, tch, ms+	ctrl/ tch, ms+ mc	ctrl/ tch, rtp, snd/ ms	ctrl/ ima, rtp, ms+ mc	ctrl/ ima, rtp, ms+ mc	ctrl/ ima, rtp, ms+ mc	
episode	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
dur	120	155	29	44	77	73	31	67	41	61	151	37	28	75	39	37	38	40	68	31
T int	90		90		95				95	90							40			
St int		60	30			40-50	10			70	50								50	50
seq																				



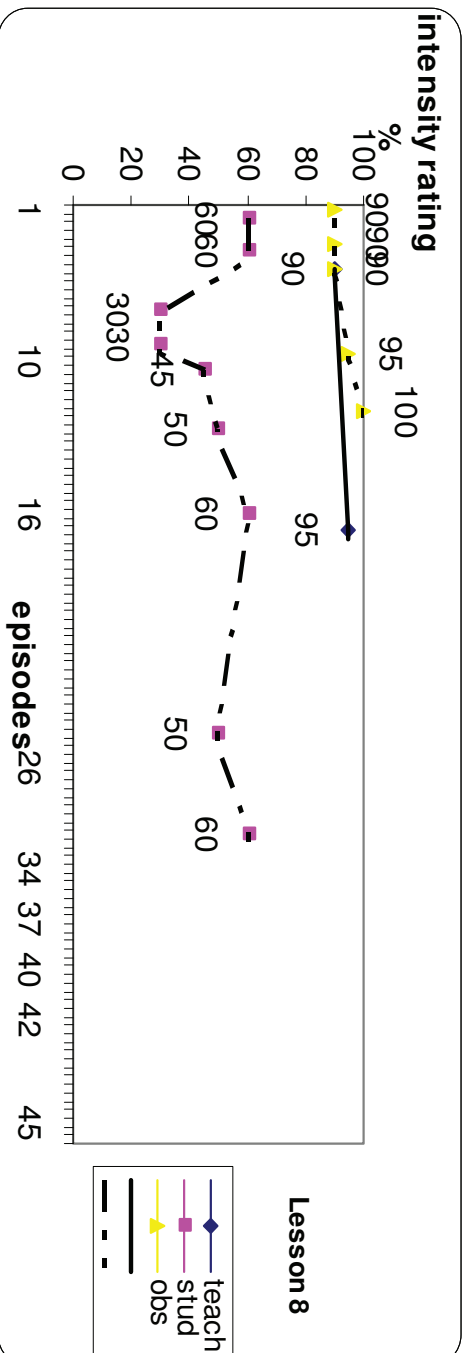
Lesson 4

L4	sg 1	sustained	sg 2											sg 1							
	Staccato		I telemann: Sonata I																		
Teacher	xpl/ rtp, tch/ ms	ctrl/ tch., rtp/ ms	ctrl/ prf, bd, tch/ ms	ctrl/ prf, bd, tch/ ms	ctrl/ rtp, tch/ ms	ctrl/ tch, bd, rtp, prf/ ms	ctrl/ tch, bd, srd/ ms	xpl/ prf/ mc	ctrl/ bd, tch/ ms+	ctrl/ bd, tch/ ms	xpl/ rtp, tch/ ms	ctrl/ dvn, tch, srd, rtp/ ms+	ctrl/ bd, tch/ ms+mc	ctrl/ bd, tch, srd, lma/ ms	ctrl/ bd, tch, prf/ ms	ctrl/ rtp, bd, tch/ ms	xpl/ prf, tch, bd/ ms	ctrl/ tch, bd/ ms	ctrl/ tch, rtp, prf/ ms	xpl/ prf/ ms	
Activity	kn	kn	kn	kn	kn	kn	kn	mp	mp	kn	mp	mp	mp	kn	mp	mp	mp	kn	mp	kn	mp
Student	ctrl/ tch/ ms	ctrl/ tch/ ms	ctrl/ prf, bd, tch/ ms	ctrl/ tch/ ms	mp ctrl/ tch/ ms	kn ctrl/ tch/ ms	kn ctrl/ tch/ ms	mp ctrl/ tch/ ms	mp ctrl/ bd, tch/ ms+	kn ctrl/ bd, tch, srd, lma/ ms	mp ctrl/ bd, tch, prf/ ms	mp ctrl/ prf/ mc+	mp ctrl/ prf/ mc+	kn ctrl/ tch, bd/ ms	kn ctrl/ tch, bd/ ms	mp ctrl/ tch, rtp, prf/ ms	kn ctrl/ tch, bd/ ms	mp ctrl/ prf, rtp, prf/ ms	kn ctrl/ tch, rtp, ms	mp	
Episode	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Duration	88	58	67	54	40	55	52	18	46	79	110	116	51	30	61	106	112	111	63	70	10
IR % T	70		80	80	60-	80	60-	80													
IR % St	80		80		80	80		60													
seq																					



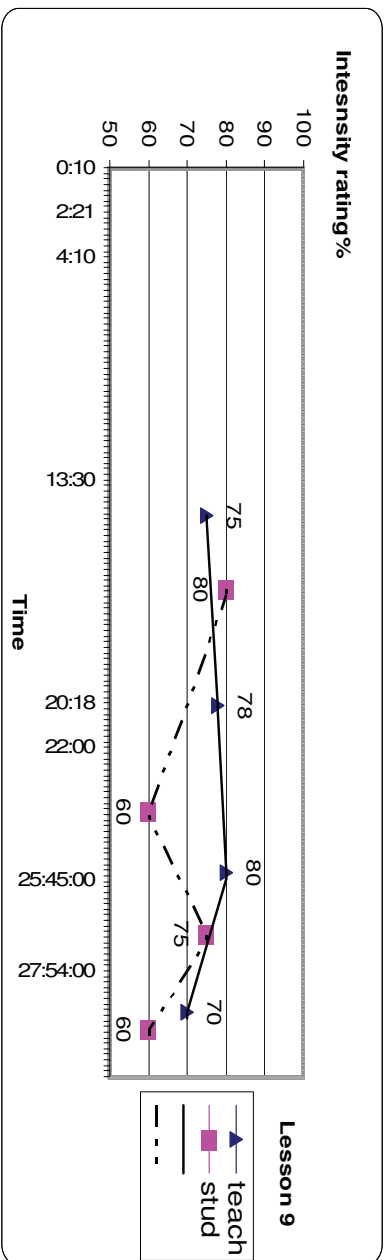
Lesson 8

L8	sg1	declining	performing	and discussion	feedback	sg2	sustained	Pure notes	sg3	declined ,	Discussion								
	play	Good enough?					Second time		relax hands down	worry about tch									
t	mp	xpl/	xpl/	xpl/	xpl/	xpl/	emo,	tch,	dyn	tch,	xpl/	xpl/							
	prf/	prf/	prf/	prf/	emo,	emo,	emo,	bd,	rp/	ima,	bd,	emo,							
	emo/	emo/	ima/	ima/	prf/	prf/	prf/	rp/	ms+	tch,	tch,	tch/							
	ms	ms	ms	ms	emo/	emo/	emo/	ms+	ima/	bd/	emo/	ms							
st	kn	kn	kn	kn	kn	kn	kn	mp	mp	kn	kn	mp							
epis	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
dur	(7:08)	60	77	43	23	14	203	50	183	22	209	138	103	62	82	119	106	39	57
t	90	90	90	90			95	95	30	45	100	50	6	7	60				
obs	90	60	60	60			30	30	30	45	100	50	6	7	60				
st	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
seq	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19



Lesson 9

L9	sg1	1	2	3	4	5	prt	I want to play again	sg2	Berot	sustained	tech	Change position relax	sg3	strengthened	Musical what kind?	How to	Notes dots	sg4	how were we?	declined		
		6	7	8	9	10																11	12
		ctrl/ lch/ ima/ ms	ctrl/ tch/ bcl/ ms	xpl/ tch/ ms	xpl/ tch/ bcl/ ms	ctrl/ tch/ bcl/ ms	ctrl/ org/ tch/ ms+	ctrl/ org/ tch/ ms+	xpl/ prt/ ms	xpl/ mc	xpl/ prt/ ms	xpl/ rtp/ ms	xpl/ ima/ org/ ms	ctrl/ prt/ ms	ctrl/ tch/ bcl/ ms	ctrl/ tch/ bcl/ ms	ctrl/ org/ ima/ ms	xpl/ org/ ima/ mc	xpl/ prt/ ima/ mc	xpl/ prt/ ima/ mc	xpl/ org/ ms	xpl/ ima/ mc	xpl/ prt/ ms
	kn	kn	kn	kn	kn	mp	kn	mp	kn	mp	mp	kn	mp	kn	mp	kn	kn	kn	mp	fp	fp	kn	



Lesson 10 cont.

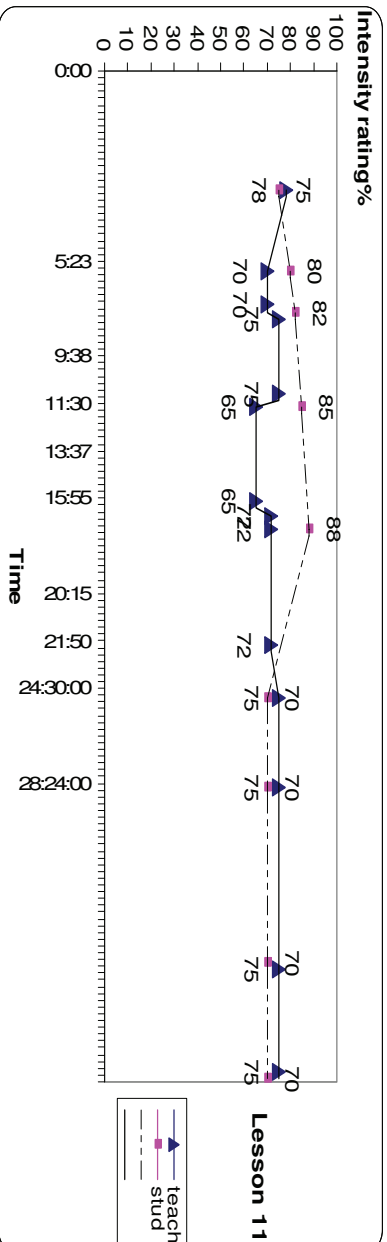
L10	sg3	strengthened	pulse	cello saved	Ens. style, tempo	again	how is it?	sg4 Phrasing by bow	sustained	frosch							
	ctrl/ tch, prt, ens/ ms	ctrl/ rp, ens/ ms	ctrl/ rp/ ens/ ms	xpl/ ens/ ms	xpl/ org, rp, ens/ ms	ctrl/ rp, ms+ mc	ctrl/ rp, art, ms	ctrl/ ima, rp/ ms+ mc	ctrl/ dvn, rp/ ms+ mc	ctrl/ dvn, rp/ ms+ mc	ctrl/ tch/ prt, ms+ mc	ctrl/ tch/ prt/ ms+ mc	ctrl/ tch/ prt/ ms				
	act	mp	mp	mp	kn	mp	mp	mp	kn	mp	mp	mp	mp				
	ctrl/ tch/ rp/ ms	ctrl/ rp/ ms	ctrl/ rp/ ms	xpl/ ens/ ms	xpl/ org, rp, ens/ ms	ctrl/ rp, ms+ mc	ctrl/ rp, art, ms	ctrl/ ima, rp/ ms+ mc	ctrl/ dvn, rp/ ms+ mc	xpl/ org, rp/ prt/ ms	ctrl/ dvn, rp/ ms+ mc	ctrl/ tch/ prt/ ms+ mc	ctrl/ tch/ prt/ ms				
epis	13		14	15	17	18	19	20	21	22	23	24	25	26	27	28	29
dur	55		51	170	50	29	36	77	75	67	162	104	45	63	46	61	44
t									75								
st	25				85						95						
seq																	

Lesson 11

L11	sg1 Bérol	sustained	student active bowing	Rehearsing imp	lml look listen	sg2 notes	sustained phone	teacher urges for aesthetic qualities listen	balance change we don't synchronize																								
	xpl tch rp ms	ctrl tch rp ms	ctrl har tch rp ms	xpl tch rp ms	ctrl prt em tch ms	ctrl tch ms	xpl tch ms	ctrl prt rp ms	ctrl ens tch ms																								
	act	mp	mp	mp	kn	kn	kn	mp	kn																								
	ctrl/ tch/ rp/ ms	ctrl/ tch/ rp ms	ctrl har tch rp ms	xpl tch rp ms	ctrl prt em tch ms	ctrl tch ms	xpl tch ms	ctrl prt rp ms	ctrl ens tch ms																								
epis	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
dur	33	15	72	51	48	68	48	25	113	64	90	63	62	41	21	25	76	13	63	19	73	39	55	15	51	29	30	92	38	75	70	43	
t			78	78	75	75	80	82				82	85						85	88	72	88											
st																																	
act	mp	mp	mp	mp	kn	mp	kn	mp	kn	kn	kn	kn	kn	mp	mp	mp	mp	mp	mp	kn	mp	mp	mp	kn	mp	mp	mp	mp	kn	mp	kn	mp	

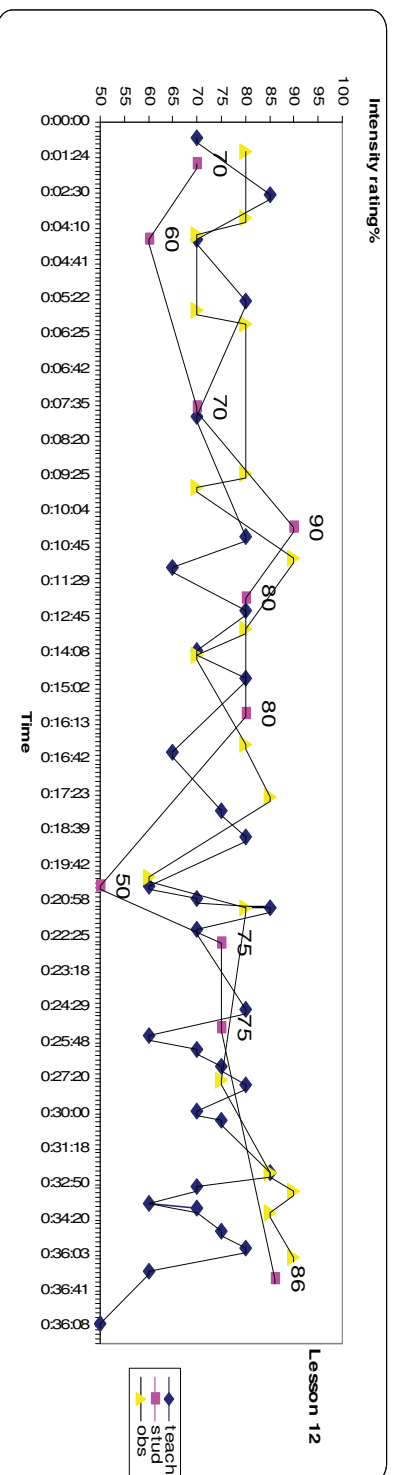
Lesson 11 cont.

L11		sg3 sustained		student gives in		sg	
what did you learn?	what did you learn?	Midnotes	Let's see how it is	You need better intonation	Future planning		
ctrl/ xpl/ prf/ ms	ctrl/ ctrl/ rtp/ prf/ ens/ har/ ms	ctrl/ har, prf, incl, rtp/ ms	ctrl/ prf/ ms	ctrl/ ens, rtp, tch/ ms	ctrl/ tch, rtp, snd/ ms+	ctrl/ xpl/ prf/ inv/ snd/ rtp/ ms	ctrl/ xpl/ prf/ org/ ms
act	kn xpl/ mp ctrl/ rtp, prf, ens, har/ ms	mp ctrl/ har, prf, incl, tch, rtp/ ms	mp ctrl/ prf/ ms	mp ctrl/ ens, rtp, tch/ ms	kn ctrl/ tch, rtp, snd/ ms	kn xpl/ har, incl, prf/ tch/ ms	kn xpl/ prf, snd, tch/ ms
epjs dur	33 34 35 36	37 38	39	40 41	42 43 44	45	46 47 48
t	10 57 24 60 75	55 46	33	57	28 112 15	85	30 41 67 75 70



Lesson 12

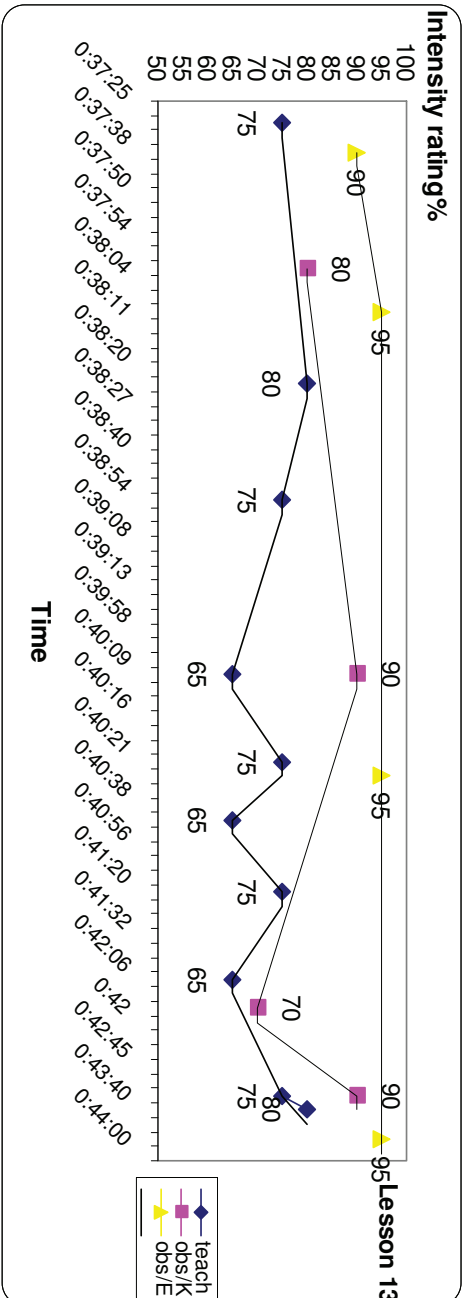
L12		sq 1		sq 2		sq 3													
double stops		Both present		Staccato		Wienlawsky Places													
declined		strengthened		more play than		sustained balanced													
st init		st init		talk		succeeds													
act	kn	kn	mp	kn	kn	kn	mp												
t	har, int, tch/ ms	xpl/ tch, bd ms	ctrl/ int, dyn, art, tch, bd ms	xpl/ org/ mc	xpl/ prf/ ens, bd tch, org/ mc	xpl/ prf, emo har/ mc	ctrl/ prf, tch, rp, snd, dyn/ ms+ mc	xpl/ tch, prf/ ms	ctrl/ snd, dyn, form/ ms+ mc	ctrl/ ens, dyn, snd, emo prf/ ms	xpl/ prf, dyn, emo tch/ ms+ mc	xpl/ tmp, dyn, int, emo tch, prf/ ms+ mc							
epis	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
dur	70	27	137	85	20	70	16	162	32	104	69	139	70	80	80	133	146	166	
t	70	70	85	70	42	80	70	70	80	80	65	80	70	80	65	45	148	70	
st	70	80	70	60	60	80	90	70	80	90	80	80	80	80	75	80	75	80	
obs																			



Lesson 12 cont.

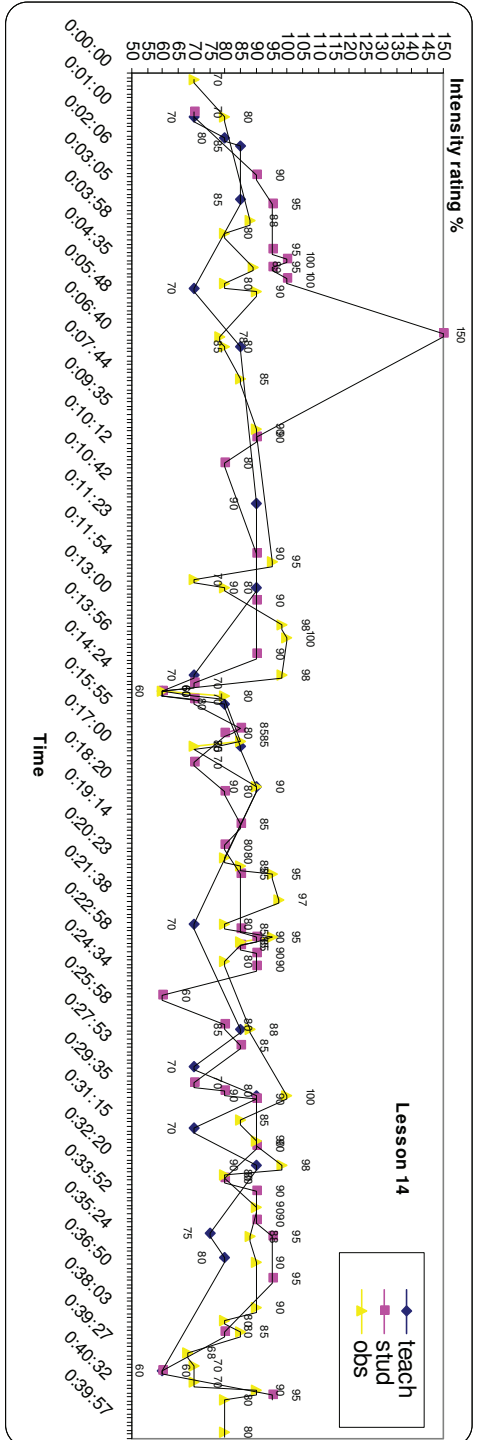
sg 4		sustained balanced				sg 5		declining	
Beethoven	xpl/ org, dyn/ ms+ mc	xpl/ tch/ ms	xpl/ ens, ima, har, dyn/ ms+ mc	ctrl/ ens, dyn/ ms+ mc	ctrl/ prf, dyn, snd/ ms	ctrl/ tch, snd, dyn/ ms	xpl/ prf, org, ens/ ms+ mc	xpl/ org/ ms	
	mp	kn	mp	mp	mp	mp	org	org	
	xpl/ org, dyn/ ms+mc	ctrl/ tch/ ms	xpl/ ens, ima, har, dyn/ mc+ ms	ctrl/ ens, dyn/ ms+ mc	ctrl/ prf, dyn, snd/ ms	ctrl/ tch, snd, dyn/ ms	xpl/ prf, org, ens/ ms	xpl/ org/ ms	
	19	20	21	22	23	24	25	26	
	52	12	188	148	27	167	142	51	
	60	70	75	70	75	85	70	60	
			80			60	70	50	
			75			85	85	86	
								90	
			75						

L13		sg1 strengthened		sg2 sustained		sg3 declined		sg4 strengthened				
teach	Posture play	ctrl/ tch/ bd/ ms	nar/ tch/ bd/ ms	ctrl/ tch/ bd/ ms	xpl/ tch/ lma/ ms	xpl/ tch/ lma/ prf/ ms+	snd. steeer bow/ car	ctrl/ nar/ tch/ ms	xpl/ lma. ens. tch/ bd/ ms	ens play, prt	ctrl/ tch/ lma/ ms	
	act	kn	rp	kn	pl	mp	np	mp	kn	mp	mp	
	stud	ctrl/ tch/ bd/ ms	nar/ tch/ bd/ ms	ctrl/ tch/ bd/ ms	xpl/ tch/ lma/ ms	ctrl/ tch/ lma/ ms+	xpl/ snd. lma. tch/ ms	ctrl/ nar/ tch/ ms	ctrl/ tch/ bd/ ms	ens. tch/ bd/ ens/ ms	ctrl/ tch/ lma/ ms	
epis	1	2	3	4	5	6	7	8	9	10	11	12
dur	56	19	14	19	45	18	23	41	14	36	94	20
teach	75	80	75	75	65	75	65	75	75	65	75	80
obs/K	80					90					70	90
obs/E	90	95										



Lesson 14

L14		1						2								
violin		strengthened			peak			preparing			declined					
	sg	ctrl/	ens/	tch/	bd/	int/	ctrl/	ens/	tch/	bd/	int/	ctrl/	ens/	tch/	bd/	int/
scales	xpl/	ctrl/	ens/	tch/	bd/	int/	ctrl/	ens/	tch/	bd/	int/	ctrl/	ens/	tch/	bd/	int/
t	mc	ms	ms	ms	ms	ms	ms	ms	ms	ms	ms	ms	ms	ms	ms	ms
mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp
xpl/	ctrl/	ctrl/	ens/	tch/	bd/	int/	ctrl/	ens/	tch/	bd/	int/	ctrl/	ens/	tch/	bd/	int/
orig/	ens/	ens/	tch/	tch/	bd/	int/	ens/	tch/	bd/	int/	ens/	tch/	bd/	int/	ens/	tch/
tch/	bd/	bd/	bd/	bd/	bd/	bd/	bd/	bd/	bd/	bd/	bd/	bd/	bd/	bd/	bd/	bd/
mc	ms	ms	ms	ms	ms	ms	ms	ms	ms	ms	ms	ms	ms	ms	ms	ms
st	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp	mp
epis	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
dur	68	7	48	93	55	32	100	70	172	20	40	42	49	17	40	158
t		70	80	85	85	90		70	85		90	80	90	90	70	70
st		70		90	95		80	90	78		80	85		80	80	98
obs	70	80			88	80	89	80	90	78	80	85		90	80	98



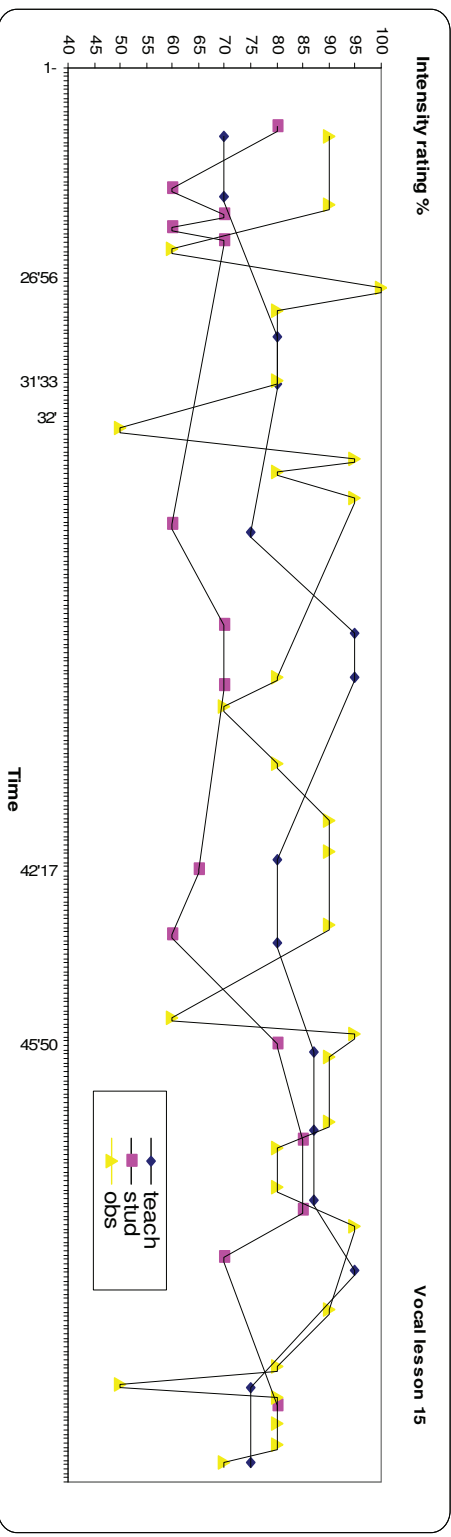
Lesson 14 (cont.)

L14		sg3		sg4		sg4 (cont.)	
Strengthened		Telermann		strengthened		altering peak	
t	xpl/ tch, rtp, hav/ ms+	ctrl/ rtp, snd, bd/ ms	xpl/ rtp, ens/ ms+	xpl/ prt/ tch, ms	ctrl/ ima, ens/ ms	xpl/ tch, snd, ens, org/ ms	ctrl/ rtp, prt/ ms+
kn	kn	mp	kn	mp	kn	kn	kn
episl	16	17	18	19	20	21	22
dur	90	45	37	59	61	70	53
t	60	80	85	90	80	85	70
st	60	70	85	80	85	90	85
obs	60	80	85	70	80	85	90
Sequence		small things, super ball		extend epis		from the beginning	
t	xpl/ dyn, int/ ms	xpl/ prt/ tch, ima, bd/ ms	ctrl/ rtp, snd, bd/ ms	ctrl/ rtp, snd, bd, rtp, ms	ctrl/ dyn, snd, tch, int/ ms	xpl/ ima, ens/ ms	xpl/ tch, snd, ens, org/ ms
kn	kn	kn	mp	mp	kn	kn	kn
episl	16	17	18	19	20	21	22
dur	90	45	37	59	61	70	53
t	60	80	85	90	80	85	70
st	60	70	85	80	85	90	85
obs	60	80	85	70	80	85	90
clockenspiel		sustained balancing		declining		talking practical	
t	xpl/ tmp/ ms	xpl/ ima, prt, dyn/ ms+	xpl/ ima, prt, dyn, snd/ ms	xpl/ ima, prt, dyn, snd/ ms	xpl/ ima, prt/ ms+	xpl/ org, prt/ ms+	xpl/ prt/ body/ ms
kn	kn	kn	kn	kn	kn	kn	kn
episl	33	34	35	36	37	38	39
dur	26	92	42	79	51	35	57
t	90	90	80	95	80	60	60
st	90	88	90	90	80	85	70
obs	90	88	90	90	80	85	70
the ball		Up beat		the ball		sg4 (cont.)	
t	ctrl/ rtp, ima, ms+	ctrl/ rtp, prt/ ms	ctrl/ rtp, prt/ ms	ctrl/ rtp, prt/ ms	ctrl/ rtp, prt/ ms	xpl/ org/ mc	ctrl/ dyn, art/ ms+
kn	kn	kn	kn	kn	kn	kn	mp
episl	29	27	28	27	28	29	31
dur	112	94	71	85	70	90	35
t	90	85	70	85	70	90	90
st	90	85	70	85	70	90	80
obs	100	85	70	85	70	90	80

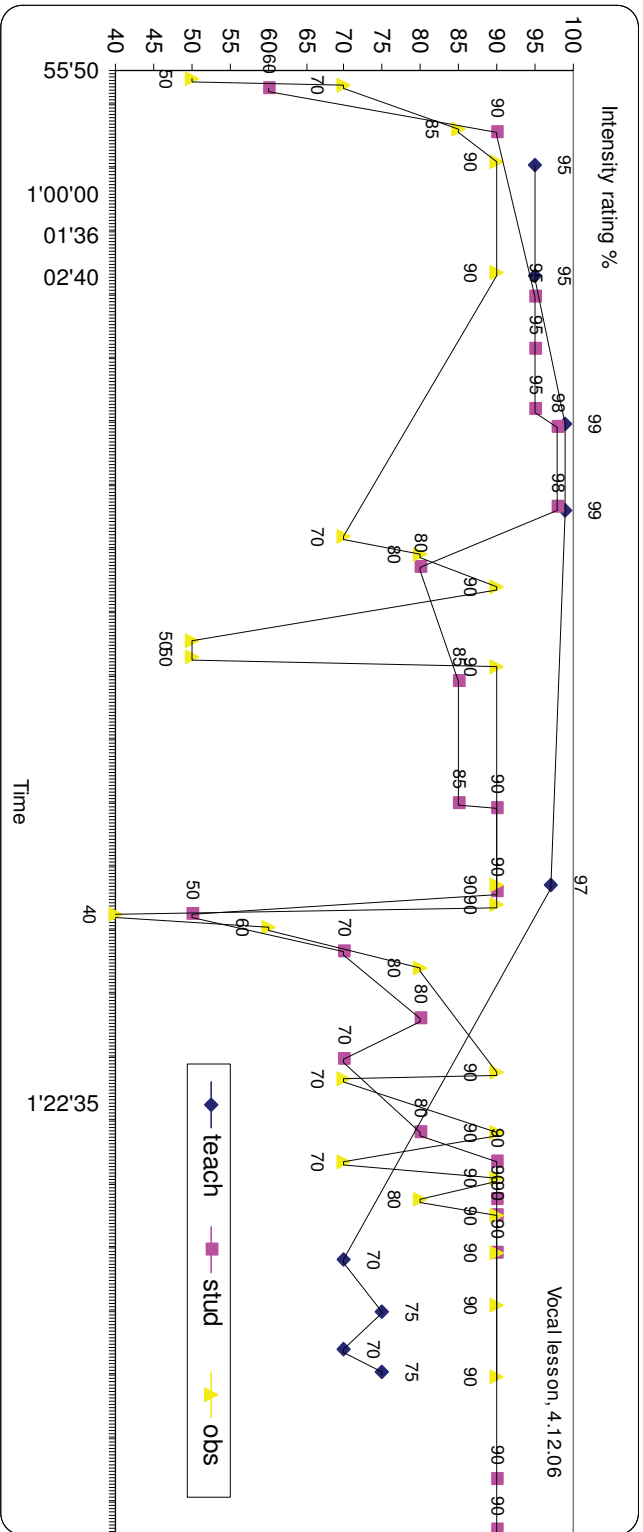
L14		sg5		sg6	
sustained balancing		clockenspiel		declining	
t	xpl/ ima, prt, dyn/ ms+	xpl/ ima, prt, dyn, snd/ ms	xpl/ ima, prt, dyn, snd/ ms	xpl/ ima, prt/ ms+	xpl/ org, prt/ ms+
kn	kn	kn	kn	kn	kn
episl	33	34	35	36	37
dur	26	92	42	79	51
t	90	90	80	95	80
st	90	88	90	90	80
obs	90	88	90	90	80
Mpl/kn Dyn alternatives		talking practical		the ball	
t	xpl/ ima, prt, dyn/ ms+	xpl/ ima, prt, dyn, snd/ ms	xpl/ ima, prt/ ms+	xpl/ org, prt/ ms+	ctrl/ rtp, prt/ ms
kn	kn	kn	kn	kn	kn
episl	33	34	35	36	37
dur	26	92	42	79	51
t	90	90	80	95	80
st	90	88	90	90	80
obs	90	88	90	90	80

Lesson 15

L15		sg1	sustained	obj var	Shared stor	sing	Order of the songs? chat	sg2	declined	personal feedback									
act	mp	ctrl/ prf/ ms+ mc	org xpl/ prf/ org prf/ ms	kn xpl/ prf/ ens, bd, time	kn xpl/ prf/ ens, em	mp ctrl/ prf/ ms+	kn xpl/ prf/ ens, prf/ ms	kn xpl/ prf/ ima/ ms	kn xpl/ har/ prf/ ms+	org xpl/ org, prf/ ms									
st	mp	ctrl/ prf/ ms+ mc	org xpl/ prf/ org prf/ ms	kn xpl/ prf/ ens, bd, time	kn xpl/ prf/ ens, em	mp ctrl/ prf/ ms+	kn xpl/ prf/ ens, prf/ ms	kn xpl/ prf/ ima/ ms	kn xpl/ har/ prf/ ms+	org xpl/ org, prf/ ms									
epis dur	1 (17:50)	2 9 70	3 84 60	4 75 60	5 46 70	6 16 60	7 (7:39) 100	8 31 80	9 60 80	10 12 25	11 23 50	12 61 95	13 50 80	14 41 75	15 20 60	16 12 75	17 20 13	18 13 14	19 14
st	mp	ctrl/ prf/ ms+ mc	org xpl/ prf/ org prf/ ms	kn xpl/ prf/ ens, bd, time	kn xpl/ prf/ ens, em	mp ctrl/ prf/ ms+	kn xpl/ prf/ ens, prf/ ms	kn xpl/ prf/ ima/ ms	kn xpl/ har/ prf/ ms+	org xpl/ org, prf/ ms	kn xpl/ prf/ ima/ ms	mp ctrl/ prf/ ms+	mp ctrl/ prf/ ms+	mp ctrl/ prf/ ms+	mp ctrl/ prf/ ms+	mp ctrl/ prf/ ms+	mp ctrl/ prf/ ms+	mp ctrl/ prf/ ms+	mp ctrl/ prf/ ms+

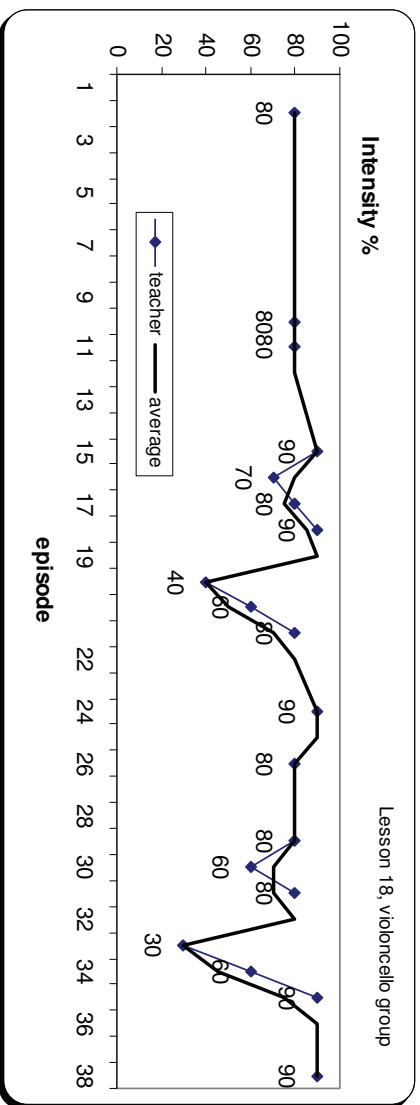


Lesson 16



Lesson 18

L18	sg1	sustained	sg2	sustained	sg3	strengthened	position	rules
Body intro	xpl/ ms	ctrl/ play, bdl/ ms	ctrl/ ima, bdl/ ms	ctrl/ tch, bdl/ ms	ctrl/ tch, bdl, prt/ ms	xpl/ ms	ctrl/ rp, ens, tch, bdl/ ms	ctrl/ ima, tch, prt, bdl/ ms
	ctrl/ play, bdl/ ms	ctrl/ ima, bdl/ ms	ctrl/ tch, bdl/ ms	ctrl/ tch, prt/ ms	xpl/ ms	ctrl/ ima, prt/ ms	ctrl/ rp, ens, tch, bdl/ ms	ctrl/ ima, tch, prt, bdl/ ms
Listen A	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms
	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms
Strail	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms
	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms
Attention	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms
	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms
1 by 1	xpl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms
	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms
rabbit, together	xpl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms
	tch, prt/ ms	ima, prt/ ms	ima, prt/ ms	ima, prt/ ms	ima, prt/ ms	ima, prt/ ms	ima, prt/ ms	ima, prt/ ms
behind c traffic lights	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms
	ens/ ms	ens/ ms	ens/ ms	ens/ ms	ens/ ms	ens/ ms	ens/ ms	ens/ ms
Common speed rabbit	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms
	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms	bdl/ ms
rules	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms	ctrl/ ms
	ens/ ms	ens/ ms	ens/ ms	ens/ ms	ens/ ms	ens/ ms	ens/ ms	ens/ ms



Lesson 18 (cont.)

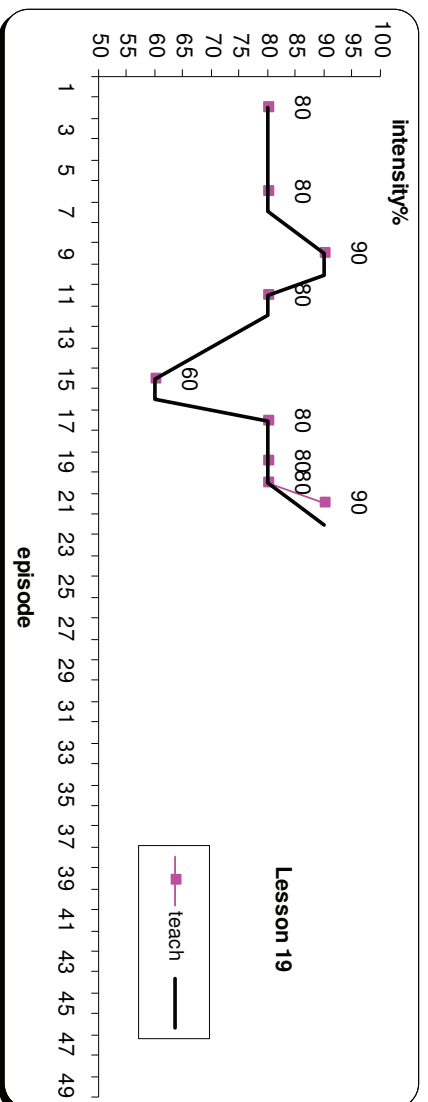
	L18		sg4		strengthened		sg5		sustained		sg6		strengthened		jam			
	ball		sing+clap		star		Attention		play+clap one by one		cuckoo		Fantasia, improvisation		Old castle		bow	
t	ctrl/ tch/ mns	rp/ ens/ ms	xpl/ bcl/ rpd/ ens/ mnc	rp/ ens/ ms	ctrl/ rpd/ ens/ ms	ctrl/ rpd/ ens/ ms	ctrl/ rpd/ ens/ ms	ctrl/ rpd/ ens/ ms	ctrl/ rpd/ ens/ ms	ctrl/ rpd/ ens/ ms	ctrl/ rpd/ ens/ ms	ctrl/ rpd/ ens/ ms	ctrl/ rpd/ ens/ ms	ctrl/ rpd/ ens/ ms	ctrl/ rpd/ ens/ ms	ctrl/ rpd/ ens/ ms	ctrl/ rpd/ ens/ ms	ctrl/ rpd/ ens/ ms
act	mnp	mnp	mnp	mnp	mnp	mnp	mnp	mnp	mnp	mnp	mnp	mnp	mnp	mnp	mnp	mnp	mnp	mnp
epis dur int	21 40 80	22 22	23 5	24 47 90	25 19	26 16 80	27 16 80	28 13 80	29 14 80	30 36 60	31 80	32 15	33 30	34 60	35 90	36 73	37 4	38 4 90
seq																		

Lesson 19

	L19		sg1		sustained		sg2		strengthened		sg2		strengthened		sg2		strengthened									
	Toning, warming up,		snowman		Draw sun song		Cellos up		Notes		one by one sun song		together		Parent play		together									
t	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms	ctrl/ har/ bd/ ms								
act	np	pl	rp	rp	pl	np	np	mp	mp	kn	kn	kn	mp	mp	mp	mp	mp	mp								
epis dur int	1 21	2 28 80	3 44 9	4 26 99	5 41	6 113 80	7 19	8 26	9 53 90	10 33	11 23 80	12 34	13 18	14 30	15 35 60	16 26	17 80	18 35 80	19 37 80	20 54 80	21 48 90	22 59	23 38	24 43	25 32	26 33

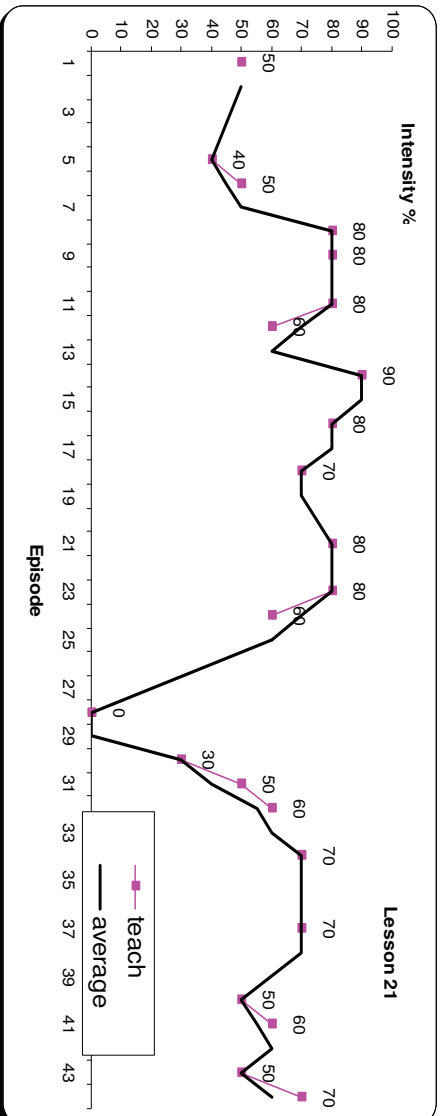
Lesson 19 (cont.)

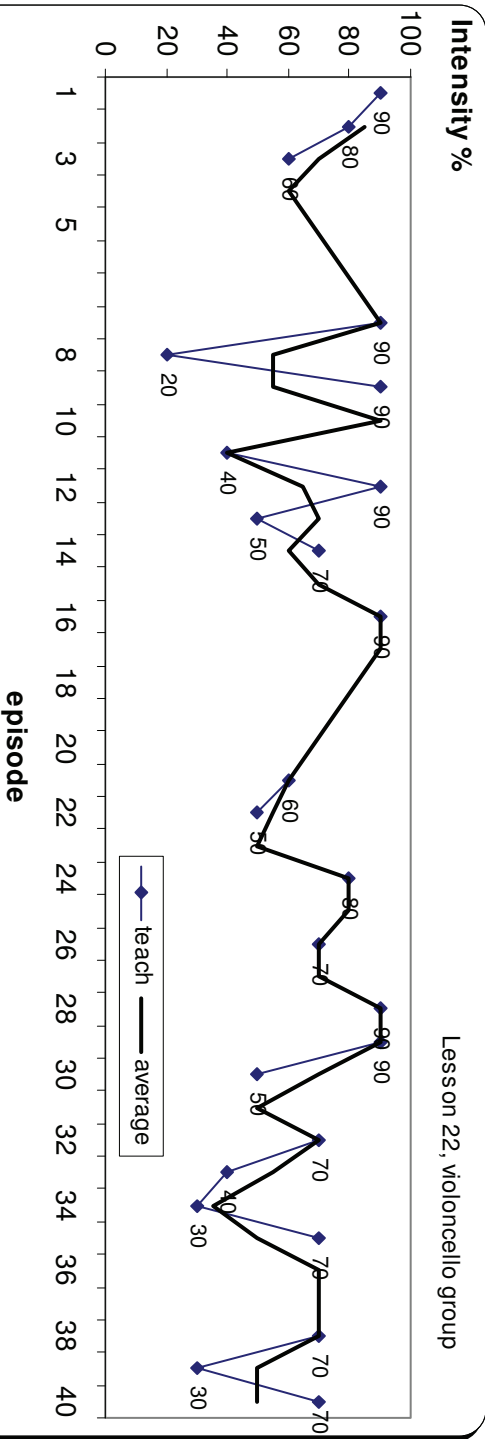
L19		sg3		sustained		sustained		rabbit		Fantasia, attention		Snail, extended		Carrot selling		sg4		declining		Why, refl		sg5		sustained		speeding			
		songs from the bag		from the bag		from the bag		from the bag		Fantasia, attention		Snail, extended		Carrot selling		Flower stickers		flower stickers		Why, refl		all four fingers in little rabbit		all four fingers in little rabbit		speeding			
act	np	nar/	ctrl/	mp	ctrl/	np	ctrl/	np	ctrl/	np	ctrl/	np	ctrl/	np	nar/	np	np	np	ctrl/	Np/kn	kn	kn	mp	mp	mp	mp	mp	mp	
	ima/	ima/	tch,	ima/	tch,	ima/	tch,	ima/	tch,	ima/	tch,	ima/	tch,	ima/	ima/	tch,	org,	tch,	bd,	tch,	tch,	tch/	tch/	tch/	tch,	tch,	tch,	ens,	
st	mc	mc	ens,	ms+	ms+	mc	ms+	mc	ms+	mc	ms+	mc	ms+	mc	mc	bd/	bd,	bd,	bd,	ms	ms	ms	ms	ms	ms	ms	ms	ms	
	ma/	ma/	tch,	ma/	tch,	ma/	tch,	ma/	tch,	ma/	tch,	ma/	tch,	ma/	ma/	tch,	org,	tch,	bd,	tch,	ima/	ima/	ima/	ima/	ima/	ima/	ima/	ima/	ima/
epis	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	47	48	49	47	48	49
dur	55	47	17	42	51	35	26	12	54	9	60	92	87	53	60	29	20	45	29	28	24	18	28	24	18	28	24	18	
int																													



Lesson 21 (cont.)

L21		sq4	strengthened	rest	bow	snail	dismantling, disassembling	Snowman							
t	song	xpl/ prf/ mc	ctrl/ ima. bd. tch/ ms	nar/ ima. tch. bd. rtp/ ms	ctrl/ tech. ens/ mc+	ima. ens. prf/ mc	nar/ ima. ens. dyn/ mc+	xpl/ har/ mc	ctrl/ ens/ mc	xpl/ ima. ens. bd/ mc	ctrl/ ima. bd. tch/ prf/ ms	xpl/ prf/ ms			
	act	mp	mp	np	np	kn	mp	mp	mp	pl	mp	mp			
	st	xpl/ prf/ mc	ctrl/ ima. bd. tch/ ms	ctrl/ ima. tch. bd. rtp/ ms	ctrl/ tech. ens/ mc+	xpl/ ima. ens. prf/ mc	ctrl/ ima. ens. ms+	nar/ ima. ens. dyn/ mc+	ctrl/ har. ens/ ms+	ctrl/ ens/ ms	ctrl/ ima. ens. bd. mc	ctrl/ ima. bd. tch/ prf/ ms	ctrl/ prf/ ms		
epis	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
dur	28	43	39	10	19	15	51	30	59	19	34	57	67	75	16
int		30	50	60		70		70	70		50	60		50	70





Appendix 7: Abbreviations used in the analysis

Objects of instrumental music lesson		
Mship	Musicianship	Focusing on the player, musician, and his or her competence, ability to play, sing or perform music by constructing statements, actions, and or other means of instruction. Musical problem solving with and through the instrument, the player or his or her body. Concerning personal and musical growth of the person
Mcal	Musical ideal	Constructing statements, actions, and or other means of instruction concerning the music, composition, or rhythmic, harmonic, or melodic patterns. Musical problem solving based on the written music, ideas of the composer, aesthetical and musical values represented by the composition.
Mship+Mcal	Musicianship and musical	Constructing statements, actions, and or other means of instruction concerning the music, composition, or rhythmic, harmonic, or melodic patterns. Musical problem solving based on the written music, ideas of the composer, aesthetical and musical values represented by the composition.
Mrc	Musical re-contextualization	Musical and pedagogical problem solving in re-contextualizing the original composition with related musicianship. Constructing elements for alternate expressions through the instrument and with using the elements of a composition. Reflecting on changes of styles, genres, or cultural setting. Reflecting on the purpose of a musical or pedagogical improvisation.
Modes of communicative activity in instrumental lesson		
Exp	Explanation	General remarks, adjustments, assessments on playing, the music, organizing, or other matters in a lesson. Reasoning by linear and thinking, or practical logic, which is focused on technical or musical issues. It uses examples, and follows a linear time conception. Neutral statements. Meta talk. Pondering, listening, considering, nonverbal expression of understanding. Prompting, suggesting, focusing on next topic, or introducing next assignment.
Ctrl	Control	Specified urging, advising, directing on instrumental technique, musical phrasing, practicing, or on other matters in musical problem solving. Singing, conducting, offering verbal directions to provide guidance. Direct and intentional influence on one's own or other person's musical expression, playing technique, musical or other behavior. Prompting to use senses: look at, hear, and feel. Mastering by audio-visual and kinesthetic means.
Nar	Narrative	Personal and emotional viewpoint, storytelling and imaginative thinking or acting. Allowing the story or imaginative image to lead the musical expression. Creative improvisation through discussion or musical expression. Expressing the written music with imaginative variations.
Pedagogical targets and proximal goals in instrumental lesson		
RTP		Rhythm, Tempo, Pulse
Har	Int	Harmony and Intonation
Snd		Sound
Dyn		Dynamics
Ens		Ensemble, playing together
Tch		Technique
Bd		Body
Emo		Emotion
Prf		Performance
Org		Organizing
Irr		Irrational

Appendix 8: Definitions of terms within Activity Theory

Introduction to the glossary

This study makes use of specialized terminology from the fields of Activity Theory and music. Some of the terms may appear to be familiar but are actually used in rather unusual ways according to the conventions of Activity Theory. There are various interpretations of the terminology of Activity Theory, but the purpose of this section is to clarify how these terms are used in my study, according to my own interpretations of the work of various scholars in this field, particularly Ritva Engeström. Therefore, these definitions are context dependent. Typical to Activity Theory the meanings are not stable.

Culture is formed by and formative of human thought and action, and inseparable from human development (Barrett 2005).

Activity Theory seeks to answer the question of ‘what is human activity?’ by dismantling its complex mechanisms. Activity Theory is based on Vygotsky’s et al. analyses of artifact mediated action, and a synthesis of Leontiev’s general activity theory. Activity Theory seeks to investigate and provide a set of basic principles, which entail a broader conceptual framework with which to understand the goal oriented, socially and culturally influenced practices of humans. Activity Theory focuses on activity and the historically developing *object* of an activity.

Internalization: In instrumental music lessons, this means that the joint work by a teacher and student, for example, actions, try-outs, and discussions on musical cultivation like better sound quality, is followed by the student’s individual work with inner talk, which refers to what she experienced in the lesson concerning actions for better sound production.

Externalization means that thinking and action are objectified in cultural artifacts, for example, in the realization of a technique in a performance, in the next lesson, or in a concert.

Value in instrumental music lesson is connected to the pedagogical process of cultivation in music making focusing on quality of the mediated actions and cultural tools. As an experience, the combination of control and enjoyment (see Schenk 2000) within the musical and pedagogical production has qualities that a spontaneous and uncontrolled activity does not have.

Quality in interaction of instrumental lessons means passion for music with control of communication. Quality refers in this study also to an experience, an event such as an instrumental lesson, which in a pragmatist view gains value through meaningful actions.

Activity activities are realized through motor and mental actions, which are directed by conscious goals. Although individual actions produce the activity, the activity is always a system of its own. It is historically and concretely directed towards a certain *object*, which motivates individuals to act.

Activity system suggests the possibility of analyzing a multitude of relations within the triangular structure of activity.

Context is an *object*-oriented activity (Engeström, Y. 1987). Context is both internal to people, involving specific *objects* and goals, and, at the same time, external to people, involving artifacts, other people, and specific settings. Context is not a container, rather it is the method mediating meaning production.

Teaching and learning strategy is a joint convention of practices, values, ideals for instrumental lessons. Teaching and learning are distinct processes; however, in interaction they are constituent parts of the work. Strategies are generally conceived of as deliberate or purposeful processes, originally consciously applied, but normally undergoing automation as a result of development and practice (Nielsen 2004).

Dialogue in instrumental lessons provides an option for creative musical and pedagogical engagement. Dialogue is an account of human thought and development that acknowledges the role of social and cultural practices and settings (Cole 1996). This involves human thought and action, which are inseparable from human development (Vygotsky 1978; Barrett 2005). Dialogue is a cultural practice that provides a powerful means of communicating human thought and feeling. In other words, dialogue in instrumental lessons provides an option for creative musical and pedagogical engagement.

Communication means the imparting or interchange of thoughts, opinions, or information by speech, writing, or signs. More specifically, this study draws on the socio-cultural approach on communication, referring to contextualized practice, concerned with producing and constructing meanings, a practice which always takes place under specific social, cultural, and political conditions

Operations bear certain typified features, routines, of actions when they accomplish the possibilities of the activity.

Action The individual actions are directed by goals. Actions are constituted through specific operations, the natures of which are dependent on conditions in the (external and internal) environment of the subject.

Subject refers to the individual or group whose point of view is taken in the analysis of the activity.

Object is a shared interpretation and conception of the musical idea or assignment under development, which again regulates the scope of learning actions. The object is not just an object of the teacher's practical actions. In interaction, the individual actions of both the teacher and the student are oriented toward a shared problem solving on musical material in order to learn and teach to play music. The identification of an object is

always the crucial starting point in analyzing and examining any activity. An *object* motivates individuals to act.

Tool refer to internal or external mediating artifacts by which the *outcomes* are achieved

Outcome motivates the existence of an activity

Rules regulate actions and interactions within the activity system.

Community is comprised of one or more people who share the object with the *subject*.

Division of labour means that the tasks are divided horizontally between community members, as well as referring to any vertical division of power and status.

Contradiction constitute the driving force for change of activity systems, and are described as historically accumulating structural tensions within and between activity systems.

Tensions are based on internal contradictions within each corner of the activity system of the instrumental lesson. Although the teacher-student interaction reflects the emerging tensions, they often remain unarticulated and, therefore, the participants are often unable to deal with or reflect upon the emerging disturbances in their interaction.

Voice analysis also **Method of Voices**. This study applies the Method of Voices for analyzing the transcribed data from the instrumental lessons. The method integrates situational and culturally constructed features of communication, which originate in the historical background of the instrumental music lesson and music performance practices.

Utterance serves theoretically as an expanded unit of interaction that takes in and is reflected in dialogicality.

Social languages represent the viewpoint, conceptually orientated horizon and culturally minded perspective, which is called forth when constructing meaningful activity. They are the combination of the varying modes of communicative activity, explanation, control, and narrative, with the altering objects, musical ideal, musicianship, and musical re-contextualization. A social language is a process rather than a location.

Voice: voice of the speaker is his or her action, communicative action that calls for a generalized referentiality that is a social language (Engeström 1995). The speaker's voice produces and brings forth the interpretation of the reality, which is the same as being in the world and conceiving the surrounding environment.

Mode of communicative activity demonstrates how the teachers and students construct, transfer, or exchange musical and pedagogical meanings. These means of interaction draw from "a ready made ways of packeting speech that allows for creative, emergent, and even unique individual performances"

Sense making originates according to Hakkarainen (2006) terminologically from Russia. The original Russian terms “smysl” and “znacenie” are difficult to translate into English. The scope and content of “sense making” and “meaning making” are broader in Russian. They are often translated with the terms “personal significance” and “meaning.” But their difference is essential in studying children’s play where “as if” acting is based on “sense making” and not “meaning making.”

Script could be described as a historically developed artifact that has a rule-like character: scripts “codify and regulate standard procedures in repeatedly occurring cultural situations”, and even though they may be explicit, participants often do not recognize the one they are following (Engeström, Y. 1992, 79). A script could be a phased description or an instruction of how things are going to happen from the beginning to the end, including the division of roles and the expectations of the participants.

Disturbances in the script are, according to Y. Engeström (1995, 65), visible “dis-coordinations” in the flow of work and interaction within the work. They are involuntary deviations from the script.

Dilemmas are contradictions impacting the action, speech, or thinking of an individual. Dilemmas appear as hesitating, reserving, wavering, contrasting statements, and even arguing with oneself using clumps of words like “but” and “no” (Engeström, Y. 1995, 66).

Innovations are more or less conscious initiations to transcend boundaries of a script in producing a new kind of idea or solution.

Transitions are educational shifts between activities that prepare tools for each other. This context presumes a possibility for the transitions during a lesson, within which the play, narrative learning and problem solving of reality are possible simultaneously (see also, Hakkarainen 2002b).

Developmental activities are different “worlds” of musical and instrumental teaching and learning within a quite short timeframe the teachers and students enter through the application for instrumental lessons. To the contrast of children’s developmental stages or levels, this study prefers the view that the teacher and students constructed developmental activities. The quite short, yet, frequent “visits” to the distinct “worlds” in instrumental lessons supported each other creating developmental trajectories.

Appendix 9

Extract of a transcript of the stimulated interviews of Lesson L18. This table combines the comments by teacher and parents in time with the contents. The interviews took place separately: One with the teacher and one with the parents watching the video.

28.1.2006	Contents	Teacher	Parents
1:25		Tää hyppii vähän [The beginning jumps a bit.]	
2:00		Tarkoituks on, että lapset ja vanhemmat sporttaansit laulaisivat, saa osallistua, ettei tarvitse sanoa, nyt laulakaa. [The purpose is that the children and parents would sing spontaneously, so that I don't have to say: now everybody sing.]	The teacher asked him where is your father's place. This was good! I: Tota kumarusta me ollaan harjoiteltu. A: Se mitä mä rakastan A:n opetuksessa aina kun oppilas eksyy niin A sanoo että A eksyi, koskaan ei oppilas eksy vaan A eksyi. Mitä mä tein väärin et mä soitin väärin et miten tää oikein pitäis mennä.
2:50	Etana käy kaupassa NY: mä eksyin [The snale goes shopping. Now I am lost.]	Ja jos lapsi hukkaa ryhmän motoristisia syistä eikä ryhmisistä syistä, oman syyn itselleen, koska se on usein vain joku väärin, sormi ei osu tai jokin muuta vastaavaa. Se on helppo ottaa tällöin se syy. Pääsee eteenpäin. Koinnaa pearsoonaa on tietoinen vaihtaa tietyllä tavalla. Ajatus on helpompi kokiutua nimen. [My strategy is that is the child misses the rhythm I blame my self and we go on. I use my first name consciously, because it is more concrete.]	We have practiced that bow. The thing I love in her teaching is that always when the pupil gets lost she always says that she got lost. Never blaming the pupil. "I played wrong, how should this go..."
3:30		Oliko uusi juttu, tää naman seuraaminen aloititessa? No se oli sillä hetkellä. Ei vaikea. Ei vaan semmonen et heidän katseensa kohdistuu ryhmän vetäjään, että seuraavat sitä. Sitä oli tietysti se et enhan mä voi istua sellä seillon takana ja antaa niitten soitaa, eih se oii huono vaihtaa jatkoon karmailta huono vaihtaa. Keskittyvät kuunteluun se oli pointti. NY on taas ongelmia miten mä saan seuraavan alun rauhoittumaan. They follow the nose, because at the same time they follow me, again something concrete.]	
4:05	Anjan nena on teihin päin Silloin Anjan nena menee tänne näin niin sitten saa soittaa. [Watch my nose, when it goes up then you can play.]	Liikemateriaal aloititessa opiskelun rynnäsoittoa [The traffic lights work when they start the ensemble playing.]	Kaikki katsoa napotetaan A:ta, se on niinkuin taikuri, tossa, sil on tota rekvisiittaa mukana, ei ne kato sitä muuta kuin silloin kuin A näyttää.
5:00	Anjan nena ei auta nyt, mitä tarkoitaa punainen etä ei [My nose does not help now, what does red means (traffic lights).]	opiskeluaan ryhmän asoita milloin soletetaan yhdessä milloin pitää olla hiljaa, orkestraasioita er kun kapellimestari sanoo pst... to on tommonen yleinen näytettämisen myös isolla osaattako soittaa tällä tavalla Anjan vuoro teidän vuoro bravo kun anja nähyttää tänne päin niin on tiedän vuoro	

