

Lotta Ilomäki

# IN SEARCH OF MUSICIANSHIP

A Practitioner-Research Project on  
Pianists' Aural-Skills Education

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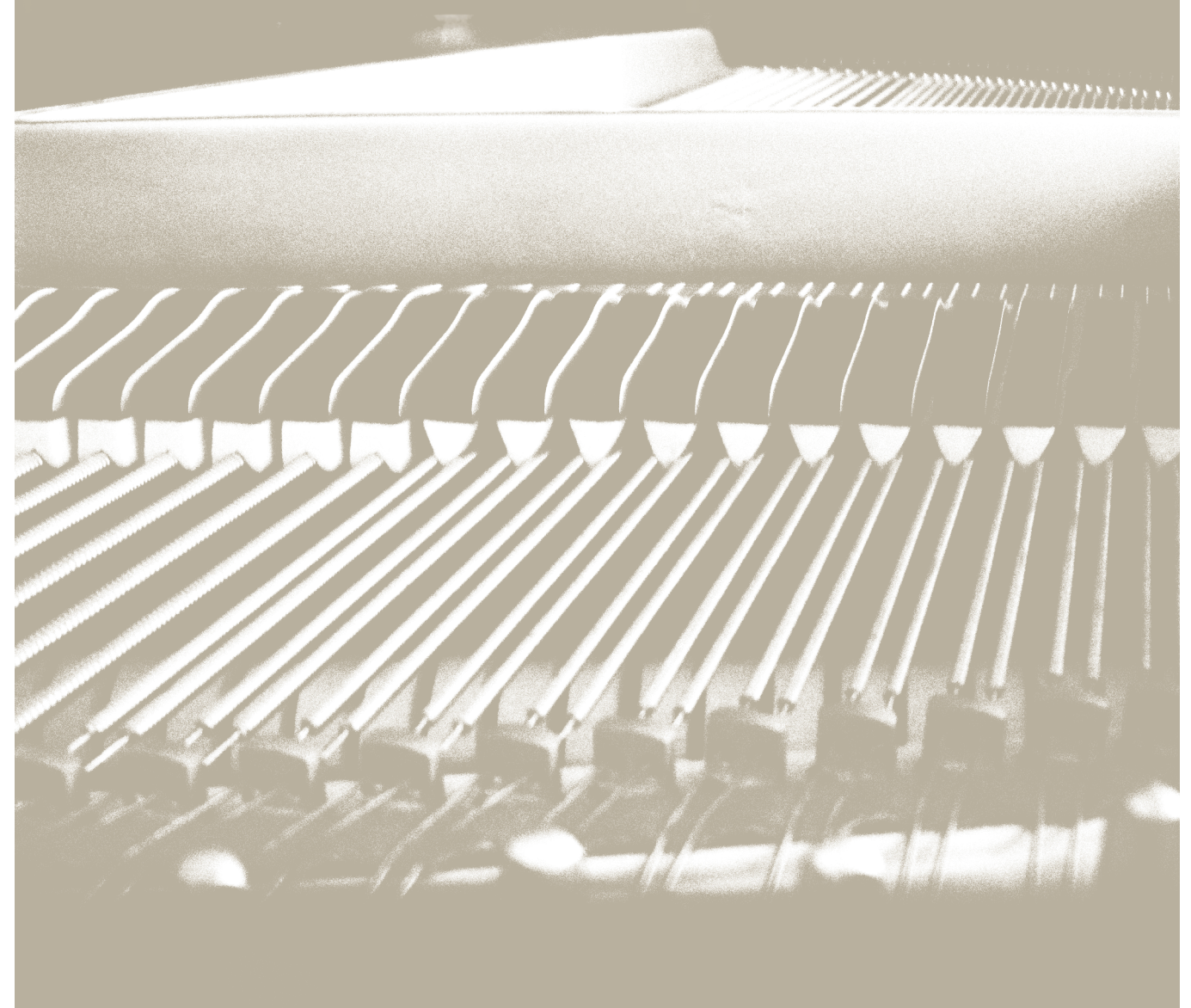
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## **Abstract**

**Ilomäki, Lotta. In Search of Musicianship: A Practitioner-Research Project on Pianists' Aural-Skills Education. Sibelius Academy, Department of Composition and Music Theory.**

The aim of this dissertation is to suggest how the learning and education of aural skills can be understood from an action-oriented perspective, which conceives that human cognition is rooted in the interaction between people and their environment. The dissertation comprises a theoretical explanation of the action-oriented perspective on aural-skills learning and a report of a practitioner-research project with pianists.

By introducing the action-oriented perspective to aural-skills learning, I seek to broaden the rather classroom-centred viewpoint that has dominated aural-skills education and to provide conceptual tools for discussing how people may learn aural skills both in formal education and through their broader engagement in music. Central sources are the philosophy of John Dewey and the work of some recent cognitive researchers (e.g. Mark Johnson) who maintain that the human body and mind are inseparable, and that habits of action are fundamental to cognition. When applied to music, this approach suggests that people's 'inner hearing' of music is based on their ability to anticipate consequences to musical actions. Students' inner-hearing skills are therefore highly active and interpretive in nature, and are also diverse in accordance with the students' previous musical experience.

In the practitioner-research project, the author taught two aural-skills courses for students with the piano as their major instrument, involving keyboard activities in the courses. The data consists of twelve students' interviews and learning journals, the teacher's journal, tape-recorded lessons and documents of the students' coursework.

During the aural-skills courses, the students' different learning processes suggested connections with their broader musical experience. The students who were experienced in singing and learning music by ear found it easier to participate and progress during the courses, whereas those students who had mainly learned music through the use of scores faced more difficulties and were not equally able to use their strengths. The keyboard work received positive feedback, but the interviews also suggested that the students had musical needs and interests that could be better



connected to aural-skills learning – such as those regarding the stylistic awareness of music, the connection between instrumental technique and aural skills and the connection between emotional and technical aspects of musical practice. From the action-oriented perspective, it is also possible to suggest giving keyboard work a more substantial position in pianists' aural-skills learning and recognising that the ability to perceive and imagine music through one's instrument is a worthwhile musical skill in itself. The results also suggested the need to further develop the practitioner-research design so as to connect the students' development interests to aural-skills practice more effectively, to broaden the documentation and evaluation of the students' learning by increasing the role of open-ended and creative musical tasks, and to support the students' individual needs for musical learning.

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# 1 Introduction

The motivation for the present study is rooted in my experience as an aural-skills teacher in higher education.<sup>1</sup> Aural-skills education is expected to develop the students' aural awareness of music and their music literacy: their ability to learn and perceive music in increasingly refined ways and to communicate using music notation and other symbols. I found the field very rich and fascinating: at all levels, we were obviously dealing with important and complex skills and learning processes. In higher education, aural-skills education should also support the students' growth into future musicianship, which is likely to involve unpredictable demands and challenges.

Nevertheless, I often found it problematic to do justice to the richness of the topic in the learning environment of a typical aural-skills classroom. In particular, I felt I had problems confining my interaction with the students to the set of activities which has become normative in aural-skills courses. Having also taught music in piano lessons and keyboard harmony and having played in ensembles, I had often witnessed how musicians seemed to employ their potential for learning much further in other environments than the aural-skills classroom. They even appeared to learn rather similar skills to those pursued in aural-skills courses through activities such as playing by ear.

To investigate the possibilities how to support students' meaningful learning of aural skills, I initiated a practitioner-research project. I organised an aural-skills course for two successive groups of volunteer students, each lasting for one academic year. I focused this research on twelve students, who were performance and music education majors and who all had the piano as their major instrument.<sup>2</sup> Besides vocal and written tasks commonly used in aural skills education, I included keyboard work in the courses, and also encouraged the students to discuss their interests and work habits as musicians. I gathered data through student interviews and learning journals, my own notes and journal, and by tape-recording the lessons.

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<sup>1</sup>I use the term 'higher education' in this research to mean education with a view to becoming music professionals, usually occurring in academies, universities, colleges or conservatories.

<sup>2</sup>One of the students had changed his major instrument to harpsichord, but had studied the piano until his entrance to higher education.

My focused research task became to clarify the nature of aural skills and aural-skills learning from a theoretical perspective that emphasises habits as the core of human knowledge and learning. Central theoretical sources are the pragmatist philosophy of John Dewey and recent cognitive and educational literature which draws on his work or conceives the human mind somewhat similarly. I will use my practitioner-research project as an example of how to analyse and develop the practice of aural-skills education from such a perspective.

I use the terms *aural-skills courses* and *aural-skills education* in this research for an educational subject, and *aural skills* for the musical skills typically taught there (Chapter 2). By the term *aural awareness*, in turn, I refer to the much broader variety of ways in which people aurally perceive, anticipate and remember music in connection to their musical activities. I also use the term *music literacy* for people's skills of communicating through notation and other conventional symbols in connection to their musical activities – my special topic of interest being the connection between music literacy and aural awareness.<sup>3</sup>

## **1.1 Looking for students' learning potential**

Specific aural-skills courses have been part of the education of musicians in conservatories since the early nineteenth century. Aims and expectations commonly set for this subject are the development of the students' aural awareness of music, their analytical skills and skills in music acquisition and their music literacy. I initiated this research motivated by concerns which seem to be echoed in lots of literature and common talk. While the improvement of one's aural awareness of music and music literacy are obviously of great interest and relevance to musicians,

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<sup>3</sup>Research on literacy, or literacies, currently covers a broad field of skills and research topics, many of which concern the cultural and contextual understanding of language and other media. As Brockmeier and Olson (2009, 4) express, the concept of literacy has exploded – or even imploded. I will not go deeper into literacy research here, but intentionally chose the term with these broader connotations. I see that aural-skills education also needs to recognise how musicians' participation in musical communities requires much more than the technical mastery of symbols. Some implications of broader literacy research for research on music pedagogy have been discussed by Blix (2008). Lilliestam (1996, 197) suggests that research on musical learning could show a continuum between orality and literacy. The term 'music literacy' is also used in a more restricted sense, i.e. to mean the skills of using standard notation (e.g. McPherson & Gabrielsson 2002).

specific aural-skills courses in formal education often seem to offer students less than rewarding experiences. As I will discuss in Chapter 2, there are various ways to conceptualise the problem and various suggested remedies – each reflecting the belief systems of their proponent. Quite broadly, researchers and pedagogues of aural skills admit that formal education has often offered a narrow version of the types of aural awareness required for skilful musicianship.

I started this research project with the assumption that experienced instrumentalists often have more existing skills and potential for learning than what they are able to demonstrate and employ in aural-skills courses. In particular, I believed in the importance of involving the knowledge acquired by the students in connection to their instrument, which can be expected to be largely tacit, beyond verbal expression. I also saw that the students could more actively take part in the direction of their own learning and feel ownership of their learning processes than what is often the case in aural-skills courses.

I decided to approach the topic through practitioner research: to combine the roles of a teacher and researcher and organise a course in which I simultaneously sought development and further understanding of my practice.<sup>4</sup> To involve the students' previous knowledge as instrumentalists, I invited participants with the same major instrument, the piano, and designed a course wherein we employed keyboard work in the course activities. By incorporating interviews, learning journals and classroom discussions in the course, I sought to encourage the students' reflection of their own learning, and to seek connections between aural-skills education and the students' needs and interests as professional musicians. I organised a basically similar course twice and worked with two successive groups of students in two academic years.

As is typical for practitioner research, I refined the theoretical approach and focused the research task on the basis of the preliminary results. I decided to formulate a twofold research task, which involves a theoretical part, and the analysis of my practitioner-research project as an example. My working with the students and

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<sup>4</sup>I will treat practitioner research as a sub-branch of action research, with emphasis on an individual actor's development of one's own practice. See Chapter 4 for a discussion of the concepts.

parallel reading of literature, namely, led me to realise how I wanted to contribute to the concept of aural skills and their learning among teachers and researchers. I found that current educational theory gives lots of support for the idea that movement and bodily action play a constitutive role in human perception, cognition and conceptualisation, and that such an approach is also very useful for understanding performing musicians' skills and needs. When comparing the educational theory with previous aural-skills literature, I realised how musicians' perception of music, and their bodily actions, could be seen as more tightly interconnected than what I found in much previous research and pedagogical practice of aural-skills education. The theoretical part of my work therefore involves both a review of previous literature in the field (Chapter 2), and an articulation of the concept of aural skills, which I see as providing a sustainable basis for performing musicians' education (Chapter 3).

As a counterpart of embodiment, the research made me increasingly aware of the need to see aural skills as culturally constructed and constrained. By taking part in music making, the students develop culturally specific patterns and skills of 'hearing'. By employing the students' instruments, I increasingly experienced how they had been acculturated into specific traditions of learning, which were connected to their main instrument. I also realised how the students needed to negotiate their place and path amidst competing ideals for professional musicianship, which also had implications for their needs for aural-skills learning.

In the theoretical part of this work, I draw on what I will call the *action-oriented* literature of human learning, which emphasises the interconnectedness of the human body and mind. According to this perspective, human knowledge is primarily based on the habits whereby people interact with their environment, and cultural tools which they appropriate to their personal action and thought (Chapter 3). Influential in this discussion has been the pragmatist philosophy of John Dewey, besides which I draw on some more recent philosophical and psychological literature, which shares a basically similar emphasis on the embodied and cultural nature of human learning.

The action-oriented learning also involves the view that learning needs to be conceived more broadly than traditional classroom learning. Besides *formal aural-*

*skills education*, aural-skills learning happens through the students' *broader engagement in music* – two terms which I juxtapose throughout this research, using the latter one so as to include the students' instrumental studies, but also anything they do outside formal aural-skills lessons. I also see that aural skills and aural awareness are never neutral or objective, but connected to the activities and contexts wherein the students have learned them. Their contextual nature means that formal education needs to reflect and justify its choices of goals and contents.

## **1.2 The research task and research questions**

This research comprises two research tasks: a theoretical research task (1) and the analysis of my practitioner-research project (2). The latter is divided into four research questions. In all, my research tasks and questions are as follows:

(1) My first research task is to propose a concept of the learning and education of aural skills from an *action-oriented* perspective: one that emphasises the interaction between people and their environment. (2) For my second research task, I will use the practitioner-research project as an example to be analysed and discussed from this perspective.

To the practitioner research project, I will pose the following research questions:

2A. How did the aural-skills courses require the twelve students to broaden their musical skills, and how did the students encounter the aims and activities of the courses? What kinds of educational choices did the students and teacher find essential for the students' meaningful learning and what kinds of problems were experienced?

2B. How did the students discuss their work and interests as pianists and becoming music professionals? How did their perception of their needs as pianists and musicians relate to the work in the aural-skills courses?

2C. What improvements could be proposed to the employment of the students' pianistic musicianship in the present courses, on the basis of the action-oriented concept of aural-skills learning?

2D. How did the present research design support the students' meaningful aural-skills learning, and how could it be improved towards the students' active

involvement?

The first question to the practitioner-research project (2A, Chapter 6) involves my description and interpretation of the students' learning processes in the aural-skills courses. My interpretation is based on the qualitative data: in a central role are the students' learning journals, and also my experiences and notes from teaching the courses. My special interest is in those aspects of the students' learning in which they needed to develop new habits of action: to learn to practise and approach music in ways which were not familiar to them. This interest also reflects my theoretical perspective: as far as the present data allows, my pursuit is to see the students' learning in the aural-skills courses in the context of their broader musical engagement and to recognise when they could draw on their previous habits and, when needed, to develop new ones. I will also describe how the students reflected on the relevance of the study for their musicianship, and how both the students and I developed an increasingly critical awareness of the possibilities and limits of the courses in service of the students' needs and interests as musicians.

For the second question to the project (2B, Chapter 7), I mainly draw on the students' interviews, and sections of their learning journals. Because I found the interviews contained critical insights broader than those we managed to employ in the courses, I decided to return to the data even after finishing the courses. For the third question (2C, Chapters 7 and 8), I will compare the data which I gained from the courses, the students' discussions of their broader engagement in music, and identify some issues in which the work in the aural-skills courses did not yet seem to be congruent with the students' needs and interests as musicians. Here again, I approach the problem from the selected theoretical perspective, and pay special attention to the mediating role of the students' habits of action, especially in connection to their instrument.

My last question to the practitioner-research project (2D) complements the previous ones by addressing my own research design: I examine the courses from the viewpoint of how they seemed to fulfil the ideal for open, self-corrective communication often set for educational action research (Chapter 9).

I address the theoretical part of my research task in Part I (Chapters 2 and 3) of this book. In Part II, I describe my practitioner-research design and methodological choices (Chapters 4 and 5) and address the two first questions concerning the practitioner-research project (Chapters 6–7). In Part III, I address the remaining questions to the practitioner-research project, which are more interpretive in nature and involve relating my findings back to the action-oriented literature (Chapters 8 and 9), and reflect on some educational implications and possibilities for further research, as well as some issues related to research ethics and methodological quality (Chapter 10). Central terms are explained in the Glossary.

The rather strong theoretical emphasis of this research means that my research process differs from the many cyclical action-research models, which aim at the quick application of findings to educational practice (Chapter 5). Here, I focus the analysis of my data, which I will present in Chapters 6–9, on the concept of aural skills, and relate my findings to previous literature both within music and in broader educational research. Since I conducted the practitioner-research project in 1998–2000, the long time-span between the data-gathering and the finishing of this dissertation contributed to the theoretical focus. The practical development of the present course design or my aural-skills teaching, in turn, are not the main goals of my research, although I will discuss some possibilities for further development in the last chapters.





**PART I: BACKGROUND AND THE THEORETICAL  
PERSPECTIVE**



## **2 Formal education in aural skills: pedagogical tradition and previous research**

In this chapter, I will contextualise my practitioner-research project by describing some pedagogical traditions and previous research of aural-skills education. I will first provide historical background on aural-skills education for instrumentalists (2.1), and then review some previous research and topics of discussion in the field (2.2). I am particularly interested in how certain activities such as dictation have gained a central and established place in instrumentalists' education, and how this education has come to be governed by certain beliefs on the nature of musical learning and thinking – such as the idea of that people's perceptual skills require specific training through work connected to notation. I will also describe how certain problems have been largely recognised in literature, and how various researchers and pedagogues have previously sought answers to them.

### **2.1 Aural-skills education in conservatories**

The aural-skills education at the Sibelius Academy in Finland, where I conducted my practitioner-research project, follows in many respects the tradition that can be dated back to the establishment of professional musicians' education in nineteenth-century conservatories. Specific aural-skills courses have belonged to instrumentalists' education since the establishment of the Paris conservatory in 1795, soon to be followed by several other conservatories, which made musicians' education increasingly formalised and professionalised (Anderson et al. 2007; Weber et al. 2007). I will first map the differing names used in different countries, and the set of common characteristics and pedagogical ideas, which I still believe justifies my use of a common term for them, and my view of them as members of a shared tradition (2.1.1). Then I will describe the establishment of the central activities of sight singing and dictation in aural-skills courses and contextualise them relative to more general trends in nineteenth-century music education (2.1.2). I will also trace back some pedagogical ideas and beliefs which I will subject to critical discussion in Chapter 3.

### 2.1.1 Aural-skills courses: nomenclature and characteristics

With the terms *aural-skills courses*, or *formal aural-skills education*, I refer to a family of educational subjects, which are specifically devoted to the development of the students' aural awareness of music and their music literacy. Terms used in English-speaking countries include *musicianship*, *ear training*, *aural training* and *aural skills* (e.g. Hedges 1999, 37). Germany and some Scandinavian countries make use of derivatives of the word "hören" (hear): *Gehörbildung*, *gehör* and *hørelære*. *Solfeggio* or *solfège* are used in Romanic languages, although the traditional term has now been substituted by *formation musicale* in France (Gonon 1995; Gartenlaub 1999). *Sight singing* and *dictation* are sometimes taught as separate subjects. Sometimes aural-skills work is included as part of courses named after pedagogical traditions such as *Kodály* or *Dalcroze*. My focus here is on higher education and especially that of instrumentalists, even if similar subjects also belong to elementary and pre-professional music education in many countries.

Despite differences in contents and nomenclature, I believe that it is justified to see the above subjects as manifestations of similar basic pedagogical ideas and as being members of a shared tradition – some naturally more closely related than others. All of the above subjects, after all, manifest the idea, dating back to the establishment of nineteenth-century conservatories, that performing musicians need specific courses to develop their musical awareness and music literacy. Sight singing, dictation and aural analysis of musical extracts or elements have been so pervasive that these activities can be regarded as defining elements for the subject, as well as the goal of cultivating the students' 'inner hearing' of music – which I will discuss in sections 2.2.1 – 2.2.2. Solmisation is also central to the subject in many countries and schools. Though many teachers and institutions also include playing by ear, improvisation, vocal warm-ups and exercises involving movement, the inclusion of such activities in the subject has often first happened while searching for means to improve musical reading, writing and aural analysis.

The target of aural-skills education is the students' musical awareness: even if the courses employ singing, playing or movement, these activities are not primarily used for their audible or visible results, but for the students' aural awareness of music

and music literacy. How these skills relate to each other, and how they can be developed and educated, are questions which teachers and researchers have answered in various ways – which will be my topic in the later sections of this chapter (2.2).

Aural-skills courses are usually regarded as a part of music-theory subjects. In comparison to analysis or theory courses, the inclusion of singing, and sometimes playing and movement, tends to give them a relatively practical character. Teachers of aural skills have traditionally belonged to the music-theory faculty, although many teachers also have a background as music educators, performing musicians, conductors or composers. (E.g. Blix & Bergby 2007b, 41–44; Gartenlaub 1999.)

There is some difference between schools and countries in the relative emphasis of performing-related skills and analysis as the ultimate goals of aural-skills education. Traditionally, the *solfège* tradition in Romanic countries has tended to stress sight-reading skills and conceive itself as a support for performing (Lescat 1999). The German *Hörerziehung*, on the other hand, has been much more oriented towards aural analysis (Kaiser 1999). Sometimes institutions have separate lessons for the two types of emphasis.

Due to my focus on higher education, I exclude from the review such literature that concerns the cultivation of music listening skills among non-musicians, or children and young people. It is useful to note, however, that the term ‘aural skills’ is also sometimes applied to ‘music appreciation’ courses or music listening activities in general music education, which are not aimed at the development of traditionally emphasised reading and writing skills (Prictor 2002).

### **2.1.2 The establishment of aural-skills education in conservatories**

Even though there are variations between countries and schools, it is possible to say that aural-skills courses have an established position in most institutes of higher education in music, and their contents have long been dominated by a rather recurring set of musical activities. Most institutes that educate music professionals have assumed that performing musicians need a specific subject to develop their music perception and music literacy, and have approached such education through activities which emphasise singing, notation, and the identification of various musical elements

and structures. Students are also commonly required to participate in aural-skills tests before they can enter professional studies, which implies that aural skills belong to professional musicianship, and also that aural skills can be located and measured in individual students. In recent decades, a growing number of researchers and pedagogues have raised critical discussion on some of these conventions, and have pointed out how they are not quite congruent with current research on the nature of musical learning. Before this discussion, it is worthwhile to provide some historical background on how aural-skills education in conservatories took the shape that it was to retain for a long time.

Even though the sight-singing tradition and its methods date back to Medieval times, as a specific conservatory subject, aural-skills education was largely shaped during a process that spanned from the French Revolution to the 1870s. Whereas music education had previously been provided largely by the church, guilds, families, or as private instruction for the noble and wealthy, state-supported conservatories gave access to wider social classes. An important hallmark was the establishment of the Paris conservatory in 1795, where the programme included ‘solfèges’: the study of rudiments of music theory and notation through vocalised exercises (Lescat 1999; Jander 2007; Weber et al. 2007). Dictation was added to the programme in 1871 (Hedges 1999, 49), and also in several other countries during the last decades of the nineteenth century (ibid. 51–53). Conservatories at that time admitted children and young people, as well as both amateurs and future professionals, and only after World War II was their role restricted to tertiary-level education (Weber et al. 2007).

Besides conservatories, the strong role of singing in nineteenth-century general education contributed to sight-singing and dictation methods that still persist in the present day. The pedagogical philosophies of Rousseau and Pestalozzi gave singing a central place in the education of the young (Swanwick & Spencer 2002; Plummeridge 2007), and influenced solmisation methods, which later also made their way into conservatory curricula.<sup>5</sup> In addition to schools, instruction in sight singing was given in ‘singing societies’ for adults (Hedges 1999, 43–44, see also Smith & Young 2007). Singing occupied a central place in public life, both continuing the ecclesiastical

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<sup>5</sup>Regarding different solmisation methods which were used in 19th century schools and conservatories, see e.g. Bullen (1878); Rahn (1997); Colles (2007) and Rainbow (2007a; 2007b and 2009).

tradition and also providing a means of expression for the new ideas of democracy and cooperation among free individuals. Its strong social position obviously contributed to the emphasis which singing and pitch skills gained in the newly formed conservatory curricula. (Butt 2002, 219–221.) The first references to melodic dictation, decades before their inclusion in conservatory curricula, were found in manuals for singing instruction; particularly important was *Singing Course* by the Swiss Pfeiffer and Nägeli, published in 1810 (Hedges 1999, 39; see also Paraczky 2009, 28–29). Dictation was included in the curriculum of the Paris Conservatory in 1871 (Hedges 1999, 49; Paraczky 2009, 28–29). The numerous sight-singing materials and dictation manuals which were soon published reflected the general trend of the time and included examples usually composed by the authors, arranged in order of difficulty (Hedges 1999, 39–53; Lescat 1999).

The early dictation manuals also proceeded into the notation of two independent parts or harmonic progressions (Hedges 1999, 64). Interval and chord recognition tasks soon became a topic of separate practice, which were, from the 1920s onwards, also included in various music examinations, the ‘ear tests’ belonging to the English music education system occupying a central role in this development (Hedges 1999, 73–83). The changed role of recognition tasks, from aids in the singing and choral education, into independently studied and tested items means that aural-skills courses, around the 1870s, had gained much of the content they were to retain until recent times. Sight-singing, dictation and various recognition tasks have long been the basic types of tasks which have dominated conservatory curricula, pedagogical texts, and even empirical research. In recent decades, though, the aural analysis of recorded music examples has gained such a central place in many schools that it could be almost seen as a part of canonical aural-skills activities (see 2.2.1). Even though aural-skills educators have also developed a variety of other activities, such as various imitation and memory tasks, this type of work has nevertheless not gained equal status with the traditional trinity of dictation, sight-singing and recognition tasks, which are also regularly tested at exams and auditions. Computer-assisted instruction has, from the 1970s on, brought alternatives to traditional classroom work. The



musical tasks favoured in aural-skills software, however, have still largely been developed on the basis of canonical activities, and emphasised drill-type practice of various recognition tasks.<sup>6</sup> (E.g. McGee 2000.)

The central role of aural-skills tasks in conservatory entrance requirements and formal qualifications, which were required from professional musicians, has also become one of its defining characteristics. In the Paris conservatory, the students' dictation skills were – since the end of the nineteenth century – tested in special 'competitions' and treated as a necessary condition for being a professional in music (Philipp & Martens 1920; Paraczky 2009, 60–61). From the critical viewpoint I wish to present in this research, the dictation and recognition tests, which have become a natural part of innumerable schools' auditions and teaching practices, easily imply that aural skills can be measured and educated in individual students, detached from the activities and contexts in which the students exercise their musicianship.

Of special interest for the present research is that the inclusion of aural-skills courses in the nineteenth-century conservatories coincided with a time of extensive changes in musicians' education, and their work and tasks in the community. Even though many activities in aural-skills classrooms have persisted from the nineteenth-century conservatories until the present day, their relationship to musicians' broader musical learning had already changed during the period 1795–1871, when aural-skills courses can be said to have taken their shape, and from that time to the present day. In addition to the changed role of singing in public life, the role of notation in musicians' work has undergone considerable changes. Even though printed music started to become available to a broadening number of people, until about 1850 pianists developed much of their knowledge of the keyboard through exercises which they had invented themselves, or learned from their teachers – not through playing from scores (Gellrich & Sundin 1993, 137–140; Gellrich & Parncutt 1998). Until then, a large part of pianists' daily work consisted of 'passage work', in which pianists

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<sup>6</sup>Applications of constructivist educational theory have recently yielded new approaches to the use of technology in aural-skills education; see section 2.2.3. Some recent developments, furthermore, are software that address musical intonation or improvisation (Jakhelln 2007, 206).

used short passages from compositions, or common harmonic patterns, as the basis of textural elaborations, improvisations, and even own compositions. Such work, however, was quickly giving way to a more repetitive type of practice, which coincided with growing expectations for instrumentalists' technical virtuosity. (Gellrich & Sundin 1993, McPherson & Gabrielsson 2002, 100.) Generally, it is possible to say that as a counterpart to the raising of standards for instrumental fluency and security, performing musicians' skills showed a narrowing tendency.

The gradual changes in musicians' work and daily practice were indeed so extensive that it is somewhat difficult to estimate how they may have influenced the design of conservatory curricula. It is possible to suggest, however, that a certain tension between broad and specialised musicianship might have been a component in the very establishment of aural-skills courses and other theoretical subjects in conservatories. If one scans through justifications for aural-skills education in literature, many of them point at performers not 'hearing' or understanding what they play.<sup>7</sup> It is likely that such complaints were reinforced by observations that the specialised educations had reduced some of the skills that were previously expected from musicians. Whereas the broadly skilled performer of the previous era would naturally learn to approach musical structures and notation from the viewpoint of their craft knowledge, the specialised education of performers would particularly bring about the danger of mechanical and unmusical execution of scores.

With regard to pianists' education, it is also worth noting that conservatory curricula have traditionally included the study of figured bass and other keyboard skills, which have points of connection with the study of harmony in aural-skills courses. As noted by Ibberson (1983, 81–82), the pedagogical materials for figured bass and related keyboard studies gradually show a shift of emphasis from the practically oriented support of keyboardists' accompaniment skills into more formalised subjects used in conservatories to develop students' harmonic awareness. This development was in many respects similar to the one happening in aural-skills courses: activities which had initially supported practical goals such as choir students'

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<sup>7</sup> See e.g. statements by Pierre Galin cited by Hedges (1999, 42) and Rainbow (2009, 127).

learning of parts, became items of specific, technically oriented study, and even became disconnected from any context in musical compositions. More and more, aural skills started to appear as specific skills which some musicians possessed more than others, and which were tested, measured and trained without necessarily having a connection to musicians' practical activities.

## **2.2 Pedagogical literature and previous research on aural-skills education**

As a subject which involves large numbers of students in different countries, aural-skills education has been the topic of lots of small-scale research and pedagogical writings in academic journals. Teachers' perspectives and the general pedagogical climate related to formal aural-skills education have also been documented in numerous textbooks, commonly with the author's introductory comments, and consequently in books reviews in various journals. Most of this literature has been devoted to teaching methods, and illustrates the passing of pedagogical tradition from previous generations to the next. The contribution of research to aural-skills pedagogy, however, has been judged by several authors as being quite limited (Butler & Lochstampf 1993, 6; Herbst 1993, ii; Karpinski 2000a, 4–5; 2000b; Klonoski 2000; McGee 2000, 117; Reitan 2007b, 217). The largest proportion of published research on aural skills, namely, concerns a rather limited set of traditional classroom activities: there are numerous empirical studies of dictation in particular. Until the past two decades, there has been very little research that has addressed the aims and rationale of aural skills education, and the nature of the skills and musical understanding involved. (For criticism, see Butler 1997; Covington 1992; Covington & Lord 1994; Reitan 2007b, 217 and Herbst 1999, 18–19, 26.)

As a background for my own theoretical approach to the learning and education of aural skills, which I will discuss in Chapter 3, I will in the following sections review some previous aural-skills literature. I will concentrate on texts on higher education and instrumentalists' education. I will describe typical contents of aural-skills courses by formulating a set of sub-skills and pedagogical topics, which recur in a variety of pedagogical texts (2.2.1), and review how various authors have stated the goals of aural-skills education (2.2.2). I will also review teachers' critical discussion

on aural-skills education – which suggests that there is quite a broad recognition of similar tensions between instrumental students’ approaches to music and the conventions of aural-skills education, which motivated my initiation of the present research (2.2.3). I will also describe how aural-skills literature has discussed instrumentalists’ learning (2.2.4), and provide some information on the Finnish tradition and practice of aural-skills education (2.2.5).

Regarding its purpose in musicians’ education and its underpinning pedagogical thinking, aural-skills education of course has much in common with other theoretical subjects of music. I nevertheless limit myself here to specific literature on aural-skills education, since my interest is to discuss the goals and activities that are typical for this subject, and particularly those aspects of it that are nonverbal and connected to music production through playing and singing.<sup>8</sup>

### **2.2.1 Sub-skills or pedagogical topics**

Aural-skills educators often seem to trust the power of regular practice and sequentially arranged exercises, without very much discussion on the nature of the skills being pursued. Nevertheless, when teachers explain and rationalise their approaches, it is possible to find a set of skills which teachers broadly attend in pedagogical texts, and which have also been supported by references to psychological research. To describe some typical topics of interest in the field, I distinguished four *sub-skills*, which in practice are highly interwoven. From the viewpoint of teachers’ work, they could also be called pedagogical topics. First of all, teachers commonly believe that students need to develop their ‘*inner hearing*’: the ability to evoke musical experiences in the absence of audible sound. To learn traditional dictation and sight-singing skills, students need to develop what I will here call *pitch location* – often referred to as ‘relative pitch’. Additionally, aural-skills methods involve the guiding of students to approach the musical tasks in meaningful patterns – a requirement which aural-skills educators especially have discussed in connection to

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<sup>8</sup>It is worth noting, though, that Covington and Lord (1994, 167) view music-analysis courses as exemplifying many characteristics that should also be present in aural-skills education: support for the students’ control of their own learning, the encouragement of multiple solutions and knowledge application into different contexts.

harmony, and which I call here *harmonic, melodic and metric patterning*. Lastly, teachers are given advice on how to support students' *analytical organisation* of music.

The four sub-skills do not represent an exhaustive view of aural-skills education, but capture the most frequent topics and therefore illustrate what is commonly attended to in aural-skills courses.<sup>9</sup> I will therefore draw together some pedagogical discussion on them, and return to them in Chapter 3 to present my interpretation of how these skills can be understood from the particular theoretical perspective, which I have chosen for this research.

### **'Inner hearing'**

A central theme in aural-skills pedagogy is students' skill of imagining or anticipating music that is not audibly present. The term 'inner hearing' is the most frequent expression for such skills, and seems to have broader and more restricted usages. Many authors use the expression widely when referring to students' abilities to activate musical experiences in the absence of audible sound (Jaques-Dalcroze 1921, 3; Larson 1993; Karpinski 2000a, 49; Covington 2005). The terms *auralizing* (Karpinski 2000a, 49) and *audiation* (Gordon 1984; 1999; see also Walters 1987) are also used broadly, covering various aspects and elements of music. In practice, however, most aural-skills educators have devoted their attention mainly to particular aspects of 'inner hearing': the students' ability to sing mentally or to anticipate how notated music might sound (Hedges 1999, 32; Blix 2007, 70; Reed 2007, 112)<sup>10</sup>, or the support of 'inner hearing' by the conscious study of various elements and structures in music (Reitan 2007a, 130; Øye 2007, 181). Several aural-skills

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<sup>9</sup>My present formulation of sub-skills gives strong emphasis to musical pitch, while addressing, for example, rhythm and texture only in connection with patterning. I made the choice of these limited sub-skills to map some of the most discussed topics in aural-skills literature, and to provide some background for my practitioner-research project, in which harmonic study was one special topic of interest. I share, however, the viewpoint of those recent authors who have warranted increasing attention in aural-skills education to other musical parameters than the notated ones (e.g. Wishart 1987; Covington & Lord 1994, 159; Pratt 1998, vii–viii; Buehrer 2000, 132, 149–150). I will return to this limitation in section 7.4.

<sup>10</sup>Regarding 'inner hearing' in nineteenth-century sight-singing methods, see also Rainbow (2009, e.g. 221).

pedagogues have also been inspired by the recommendations on singing and silent score-reading by the composer Robert Schumann<sup>11</sup> (Gartenlaub 1999, 315; Karpinski 2000a, 3; Covington 2005, 25; Paraczký 2009, 87–88).

Despite so many educators' recognition for 'inner hearing', Covington (2005) notes how teachers do not always offer their students clear means to develop such skills. The clearest examples are often found in children's education and in the pedagogical traditions connected to the renowned music educators Dalcroze, Orff and Kodály, in which teachers are commonly advised to lead their students through singing and movement to develop the ability to sustain pulse and pitch and to imagine rhythmic and melodic patterns (e.g. Frazee & Kreuter 1987; Juntunen 2004; Houlahan & Tacka 2008). Edwin Gordon and his followers have devised careful steps on how children can, through aural imitation and other practical activities, learn to audiate rhythmic, melodic and other patterns, and they view such practice as mandatory before students start to read notation.<sup>12</sup> Gordon, as well as the Kodály-inspired Houlahan and Tacka (2008, 143–162) refer to the maxim of 'sound before symbol', which in fact was already suggested by Rousseau and Pestalozzi (Plummeridge 2007; see also McPherson & Gabrielsson 2002, 101).

Even adults' educators have recognised the dependence of 'inner-hearing' skills on music production. Klonoski (1998; 2006) has noted that many students' problems in dictation tasks are related to their inability to activate in their minds the music they should write – a situation that can be improved by singing practice. He also recommends other strategies, which concern the students' skills of orientating in tonality and therefore concern the next sub-skill which I will discuss, pitch location (Klonoski 2003; 2006, 56.) Covington (2005) offers a rich variety of tasks for the development of 'inner hearing'. These involve imagining melodies and varying them in one's mind, the harmonisation of music first concretely and then mentally, and also mental practice of harmonic intervals. She also cites brain research which suggests

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<sup>11</sup>Schumann: *Musikalische Haus- und Lebensregeln* 1848 (see Schumann 1969).

<sup>12</sup>Edwin Gordon defines his concept of audiation as the skill of hearing music in one's mind with understanding, and distinguishes different types of audiation which focus on different elements of music (Gordon 1984; Gordon 1999, 44). The concept is connected to his *comprehensive music learning theory*, which has also been the basis for lots of pedagogical materials produced by The Gordon Institute for Music Learning (<http://www.giml.org/>).

that mental imagery of music activates the supplemental motor area, which supports teachers' experience on the usefulness of movement for 'inner hearing' (Covington 2005, 29).

### **Pitch location**

By far the largest amount of literature on aural-skills pedagogy has been devoted to sub-skills that are necessary for students to notate pitch without an instrument, or to sight-sing or silently read the exact pitch of melodies without an instrument. Since most people do not have absolute pitch, they need specific skills to notate or label the pitch patterns they hear, or to read notation and to anticipate how pitch patterns will sound. I use the term *pitch location* for such skills, regardless of the nomenclature and specific methods used for their learning.

Cognitive research has suggested that musical enculturation, without specific training in music, is sufficient to lead people to an implicit awareness of tonality or tonal centrality in the music of their own culture. With musical training this awareness is strengthened, so that listeners are able to recognise, for example, that melodic tones have different degrees of stability or 'fit' in a tonal context. (Cohen 2000; Temperley 2001, 173–201; Thompson & Schellenberg 2002, 466.) The central task pursued by various aural-skills methods is to connect such implicit awareness with symbols such as solmisation names, scale-degree numbers or notation, which in turn give people increasing control over their awareness of pitch. The use of solmisation or various pitch nomenclature has been a traditionally central approach to such conceptualisation. Additionally, various conscious ways for retaining the tonic in mind and finding different melodic scale-degrees are common in connection with tonal music.<sup>13</sup> Besides the awareness of pitch relationships, the practice of pitch-location skills can draw on people's ability to develop their memory for absolute pitch (Bergby & Blix 2007, 19).

In practice, 'inner hearing' and pitch location are tightly interconnected skills. Both of these are indeed involved in the previously mentioned restricted use of the

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<sup>13</sup>Awakening the students' sense of melodic scale degrees was emphasised both by the French *Galil-Paris-Chevé method* (Bullen 1878; Rainbow 2007a) and the *tonic sol-fa* developed in England by Sarah Glover and John Curwen (Hedges 1999, 47; Rainbow 2007b). For discussions of scale-degree thinking by later authors, see e.g. Telesco (1991); Larson (1993) and Karpinski (2000a, 148–154, 166).

notion of 'inner hearing', which involves the ability to anticipate how notated music will sound. Pitch-location skills always require some inner-hearing skills, since students can only locate the pitches of music that they can somehow retain in their minds. In reverse, however, it is frequent to find people who may remember and mentally hear melodies and harmonies with fluency, but may be unable to notate them. Since students in any case may have strengths and weaknesses in either skill and may concentrate their practice on either skill, I believe it obvious to conceive 'inner hearing' and pitch location as separate sub-skills.

The relative merits of various solmisation systems have been a persistent topic of discussion in aural-skills pedagogy (e.g. Larson 1988; Smith 1991; 1992; Houlahan & Tacka 1992; Rahn 1997; Karpinski 2000a; 146–148; Lorek & Pembroke 2000; McClung 2008; for a historical review, see Hughes & Gerson-Kiwi 2007).<sup>14</sup> The two most commonly used principles are *absolute solmisation*, in which solmisation syllables denote absolute pitches, and *relative solmisation*, in which the syllables are changed according to key so that the 'do' reflects the major tonic (Hughes & Gerson-Kiwi 2007; Rainbow 2007a; 2007b). Numbers have also been used for melodic scale degrees – the best known advocates of them being Jean-Jaques Rousseau, whose ideas were later included in the French Galin-Paris-Chevé method (Bullen 1878; Rainbow 2007a; Rainbow 2009, 129, 221).

In this research, my special interest is not so much in pitch nomenclature as the way in which most aural-skills methods seem to employ the production of music, and connection between sound and movement. Many instrumentalists, furthermore, appear to develop an ability to project pitch relationships to positions on their instrument, which thereby becomes a type of system for pitch relationships (Butler 1997, Covington 2005, 36). I will return to this topic in Chapter 3.

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<sup>14</sup>In recent decades, many of the explicit debates have been written by American authors, whereas many European countries have an established tradition for using a particular type of solmisation system. Romanic and many East-European countries have adopted absolute solmisation, whereas relative solmisation is used in many schools in England, and since the work of Zoltán Kodály, in Hungarian music education.



## Harmonic, melodic and metric patterning of music

As opposed to the discrete pitches, which are the most obvious units present in notation, the perception and anticipation of music in most situations needs larger and more flexible units (Serafine 1988, 7; Bamberger 1994). Students therefore often face some challenges and need pedagogical support for grasping music in meaningful units when they are dealing with notation, and especially with such tasks as dictation and sight singing. Even though not all pedagogical texts on aural skills explicitly discuss the issue, it is possible to say that lots of the advice they give to teachers is somehow connected to the students' perception and thinking of music in meaningful patterns. Students need to anticipate melodic and metric patterns horizontally and to grasp harmonic and contrapuntal patterns vertically. With reference to notation, musicians can be said to be *grouping* pitches into meaningful units. Since the discrete pitches are a starting point for musical experience in no other way but in notation, I prefer the term *patterning*. Some aural-skills educators refer to cognitive literature that uses the term *chunking* (Karpinski 2000a, 73–77, 174).

Since the human voice does not permit the study of more than one part through sound production and direct musical feedback, vocally oriented traditional aural-skills education needs to lean on ensemble work, notation and the explicit description of music for the study of polyphony and harmony. The singing of chordal or sequential patterns with solmisation names has been a typical way of supporting the students' patterning of music (e.g. Bullen 1878), as well as progressively organised dictation materials which familiarise students with melodic and interval patterns of increasing complexity (Hedges 1999, 56–57).

Some recent pedagogical texts addressed to aural-skills teachers devote special attention to the patterning of music. Karpinski (2000a) applies to aural-skills pedagogy a broad range of cognitive research, much of which concerns the perceptual patterning of music. He suggests how aural-skills educators can make conscious use of typical perceptual tendencies related to musical contour and metre in various types of aural-skills tasks, such as melodic dictations (ibid. 65–98).<sup>15</sup> Kaiser (2000, x–xi;

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<sup>15</sup>The dissertation by Brink (1980) is a very early example of extensive attention to metric patterning of music and musical contour in aural-skills pedagogy, which is also justified by reference to cognitive theories.

2004, vii–iix) even talks of ‘a new concept of aural-skills education’ (Ein neues Gehörbildungskonzept), which supports the students’ grasp of musical structures in context. He has collected a wealth of music examples that exemplify various idiomatic metric and voice-leading patterns and different types of sequences in common-practice tonal music, and suggests activities that also involve aural imitation and improvisation on an instrument. A somewhat similar combination of music examples and activities, which also involve playing and improvisation, is also central to the textbook by Phillips, Clendinning and Marvin (2005). Bergby (2007b) refers on cognitive principles related to rhythmic patterning, suggests various activities to sensitise students to musical pulse as a structural and expressive element in music, and only then proceeds to consider rhythmic notation. Foulkes-Levy (1997; 1998) suggests how aural-skills education can apply various reduction techniques, originally developed within music theory and analysis, to develop the students’ grasp of hierarchical structures in music.

### **Conscious analytical organisation**

Various means to support the students’ conscious analytical organisation of their aural experience also occupy a central place in aural-skills pedagogy. The conscious use of analytical questions and observations can be regarded as a sub-skill which aural-skills students are guided to develop. Teachers are given advice on guiding the students’ listening in connection to dictation and aural analysis tasks, or engaging the students in discussions on the structural organisation and stylistic patterns of music. Since such guidance can focus on harmonic or metric groupings, or the organisation of music in terms of melodic and harmonic scale degrees, the topic overlaps with the previous ones.

For the present research, the main topic of interest is how the organisation of one’s musical experience through the conscious description of music relates to musicians’ awareness of music through such activities as playing and singing. I will return to this question in section 3.4.

### **2.2.2 Goal statements**

The previously discussed sub-skills also frequently appear in aural-skills educators’ descriptions of the goals of their subject. The traditionally prominent role of dictation

and sight singing is also visible, in that many pedagogical texts refer to two complementary directions of work. On one hand, the students are educated to work from *sound to symbols*, and on the other hand, from *symbols to sound* (e.g. Karpinski 2000a, 3). In older texts, it is common to find authors directly referring to notating the heard and imagining how notated music sounds (e.g. Hedges 1999, 62). More recently, it has become common to speak of the two directions of work more broadly, not limited to notation. The former direction involves the students' skills in the perception and analysis of music, and the latter one, their skills of reading, performing and imagining music on the basis of notation or other symbols (e.g. Karpinski 2000a, 3).

Notions of 'inner hearing' continue to be prominent in goal statements. In the *sound to symbols* direction, authors have increasingly suggested how the perception and analysis of the heard can also happen through aural imitation or various types of verbal or visual description (e.g. Kaiser 2000; 2004; Phillips et al. 2005). It is also common for authors to note how the students' skills in the production, imagination and perception of music are interconnected (Karpinski 2000a, 3; Bergby & Blix 2007, 19).

Quite commonly, aural-skills textbooks refer to the obvious need for musicians to develop their ability to discriminate and analyse various kinds of structures in music (Karpinski 2000a, 11; 2000b; Bergby et al. 2007, iii; Blix & Bergby 2007a, 7, 13).<sup>16</sup> They also frequently emphasise how musicians' perception reflects their understanding of musical structures. How various authors then translate these general notions into practical aural-skills work reflects their somewhat differing orientations. Some schools, especially in German and Scandinavian areas, have given various types of aural analysis an independent role in the curriculum (e.g. Kaiser 2000; 2004; Reitan 2007a; Bremberg et al. 2009), while others continue to rely on notation and give their suggestions for aural analysis with the purpose being to support the students in the solving of dictation tasks. Besides the traditionally emphasised melody, rhythm and harmony, some recent texts suggest exercises for students' identification of other elements such as texture, timbre, tessitura and register, tempo, dynamics and

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<sup>16</sup>For a critical review of goal statements in selected American aural-skills textbooks, see Buehrer (2000, 129–130).

articulation (Karpinski 2000a, 11–18). Pratt (1998) bases a whole aural-skills textbook on the aural analysis and practical study of musical elements that he sees as being conventionally neglected in aural-skills education – an endeavour which I will return to when interpreting my research results in section 8.1. In France, the traditional name *sofège* was changed into *formation musicale*<sup>17</sup> as a part of a curriculum reform, which also complemented the traditional dictation work with a variety of aural analysis tasks (e.g. Gonon 1995; Gartenlaub 1999; Comtet 2008, 11–14).

With some exceptions, aural-skills literature has tended to refer to musical perception and understanding in connection to tasks which are reproductive in nature: students' perception and understanding of the music they hear has been conceived as the ability to identify, reproduce or analytically describe given musical structures. Some recent texts have challenged this convention of thinking and have urged for increased acknowledgement of the learners' personal musical contribution. Such viewpoints have often been connected to the application of constructivist educational theory (see the next section) or developmental psychology (Herbst 1993), or have been associated with the recently revised interest in improvisation among musicians (e.g. Laitz 2003; Johansen 2007 and the next section). Jazz education has also recently contributed to this discussion, and ideas such as those concerning playing by ear and improvisation have also been adapted from jazz education into broader aural-skills education (e.g. Johansen 2007).<sup>18</sup>

For the purposes of the present research, aural-skills educators' goal statements can be summarised into some observations. Pedagogues commonly view their task as refining music students' perception of music, and conceive their work as being

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<sup>17</sup>'Formation' refers to education or also construction.

<sup>18</sup>Jazz educators are increasingly developing their own pedagogical approaches to aural-skills education. Besides specific textbooks for aural skills, the types of practice which classically educated musicians often classify as aural-skills study are also addressed by literature on improvisation, transcription, or instrumental pedagogy within jazz music (e.g. Maceli 2009). While a thorough review of this pedagogical tradition is beyond the scope of this dissertation, the emphasis on improvisation and the aural transcription of music as dominant aural-skills activities have also influenced traditional aural-skills curricula. I will return to the dialogue between Afro-American and classical pedagogy also in connection to my research results in Chapter 7.

divided into two directions: *sound to symbols*, and *symbols to sound*. The first one is seen as centering on the students' perceptual, analytical and notational skills, and the second one on their reading, performing and 'inner hearing' skills in their limited, notation-oriented use. In both directions of work, authors have mostly conceived the content of their subject as consisting of activities which reproduce given material rather than elaborate on it. The aim of refining and organising musicians' perception is also commonly stated as a goal. While authors admit a connection between perception, production and imagination of music, it is rare to find them very thoroughly analysing the nature of this connection.

### **2.2.3 Critical discussion: learning environments and learning conceptions**

Despite the affluence of pedagogical materials and the interest of researchers, experiences of various types of problems in aural-skills education are common. Teachers repeatedly express difficulties in getting the students to master the desired skills, and the heterogeneity of students' skills and situations is frequently experienced as a problem (e.g. Herbst 1993, ii). Students, in turn, frequently seem to experience aural-skills courses as difficult, or feel that they do not optimally benefit from the education or see its relevance for their broader engagement in music (e.g. Covington & Lord 1994; Westermann 1995; Pratt 1998, vii–viii; Gartenlaub 1999).<sup>19</sup>

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<sup>18</sup>Most of the references to students' aural-skills experiences in literature are anecdotal rather than based on systematic research. Pratt's (1998, vii) view of students' problematic experiences was based on classroom observations in various schools in Britain by his assistant Michael Henson. A unique example of a thorough study of students' conceptions and experiences of aural-skills education, conducted among students of the Norwegian Academy of Music, is provided by Inger Elise Reitan (2006). Her results actually suggested that students held the subject as highly important, although concern about one's performance was quite common among the students (25 out of 104 participants). Reitan also collected students' perceptions of various specific contents and activities in aural-skills courses – many of which were related to the sub-skills discussed in section 2.2.1. The curriculum reform in French music schools, which included the replacement of the term *sofège* by *formation musicale*, has also been the topic of several theses and dissertations (e.g. Gonon 1995; Comtet 2008; Guichard 2009). The authors have described and analysed the pedagogical aims and ideals connected to the reform, but also drawn attention to the problems that still seem to persist in the pedagogical practice after the reform.

A review of aural-skills literature suggests that a great majority of formal aural-skills education has until recent years taken place in a very uniform and restricted learning environment, and has concentrated on dictation, sight singing, and various recognition tasks (e.g. Herbst 1993; Covington & Lord 1994; Gartenlaub 1999). Also, the position of aural-skills courses as a part of higher-education curricula seems to be rather uniform across institutions, and marked by routinised procedures for auditions, placement tests and student assessment. Recent decades have witnessed a growing critical discussion on whether or not this learning environment really optimally supports the students' musical development. Quite broadly, authors have criticised traditional recognition and dictation tasks for not developing the students' ability to grasp meaningful musical units and to solve problems in musical contexts. A recent trend in many schools has been to shift the balance from isolated recognition tasks to the analysis of composed music (e.g. Matz 1999). Dictation, in turn, has been both a topic of careful methodological attention and heavy criticism. Authors who continue to trust dictations have given suggestions for their effective use, largely stressing that teachers need to attend to the previously discussed sub-skills of 'inner hearing', pitch location and effective patterning of music (section 2.2.1). More critically oriented authors have pointed to the limited capacities of notation to guide students towards a grasp of meaningful units in music, and also to the tendency of dictation practice to give disproportionate attention to pitch and rhythm as opposed to other musical parameters (Henson 1987a, 1987b; Pratt 1987; Fayolle 1994; Matz 1999, 330; Paraczky 2009, 123–124).

Several authors have also suggested a shift in weight from dictation to alternative activities. Of special interest here are the many pedagogues and scholars who suggest aural imitation on an instrument and improvisation (Clarke 1987, 47; Covington & Lord 1994, 167–170; Kaiser 1999; 2000; Teixeira dos Santos & Del Ben 2004; Phillips et al. 2005).<sup>20</sup> While requiring the students to discriminate and locate pitches by hearing and thereby partially fulfilling similar functions to dictation, aural imitation

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<sup>20</sup>The ideas expressed by Robert Gauldin much earlier (1974, 78–79) are very similar to the cited later authors.

and especially improvisation enable students to start with a global level of analysis and postpone detailed work if needed.

Quite obviously, many activities and instructional routines have persisted in aural-skills education even if their fruitfulness to students' learning has been severely questioned. Teachers' possibilities to develop course contents have often been limited by the obligation to produce numerically comparable results (Covington 1992, 6; Pratt 1987, 6–8), or by rigid course requirements, which do not leave adequate room for many teachers' own pedagogical decisions (Paraczky 2009, 157). Several texts also note the artificial separation between different conservatory subjects as narrowing the pedagogical content of aural-skills education. Various attempts to integrate or rearrange academic courses are therefore one solution that schools have sought for the improvement of aural-skills education, some of the most renowned examples being the *Contemporary music project* in the USA in 1960s (Ward-Steinman 1987; Rogers 2000, 111), and the aforementioned French transformation of *solfège* into *formation musicale* (see the previous section).

Since the 1980s, it is possible to observe a new type of critical discussion in research on aural-skills education, which seeks explanations for frequent problems from an analysis of how the nature of aural-skills learning is conceived. *Constructivism* has become a popular name for an educational movement that stresses the learner's active role and sense of meaningfulness in the learning process. Constructivists' main tenet is that knowledge cannot simply be transmitted from one person to another, but learners need to actively construct it. (Phillips 1995; Fosnot 2005 and section 3.1.) The most thorough discussion of constructivist educational theory in connection to aural-skills education is the dissertation by Buehrer (2000), in which he summarises varying applications of constructivism in previous American aural-skills literature and offers his own curricular example. Buehrer criticises conventions of aural-skills education in the light of what he sees as five essential characteristics of human learning according to constructivist theory: 1. active construction of knowledge, 2. relevance of learning, 3. multiple perspectives, 4. reflective thinking, and 5. social negotiation (ibid. 29–48). As he points out, the pervasive model of aural-skills instruction has treated

knowledge acquisition as a passive reception process and learning as an activity based on drill and practice, and has expected students to pursue tasks which hardly exist outside aural-skills classrooms (ibid. 7–8). Furthermore, most aural-skills education has left the students solving their tasks alone, whereas they could benefit from cooperative learning and the mutual sharing of views (ibid. 143).

Some authors in the USA and England who have expressed similar criticism of traditional aural-skills education and whose work Buehrer cites in his dissertation are Covington (1992; 1997), Lord (1993; see also Covington and Lord 1994), Larson (1995) and Pratt (1998).<sup>21</sup> For more appropriate pedagogical solutions, the previous literature which he cites suggest authentic musical tasks, improvisation and the use of the students' instruments, and the students' cooperative problem solving. He, Buehrer, presents an educational application, a 'mock unit', which consists of selected music examples with aural-skills activities based on them. His suggestions include listening and analytical discussion, dictation tasks in which the students will try and reflect on different strategies, and the use of the students' instruments. He also suggests the use of computerised versions of the studied music examples for various tasks whereby the students will elaborate the given material, for example create their own melodies and explore variations on texture, timbre, and dynamics. (Buehrer 2000, 153–237.) Many of his suggestions on extracting elements from music examples and exploring them through hands-on activities have similarities to the previous suggestions by Covington and Lord (Covington 1992; Lord 1993; Covington & Lord 1994). Buehrer also suggests that assessment should follow instruction rather than vice versa, and that assessment should be based on similar, authentic and diverse activities as those used in instruction (Buehrer 2000, 205–211).

To summarise the sources cited by Buehrer, there is indeed a number of recent aural-skills pedagogues who have criticised the long prevalent tendency to base aural-skills education on rather reproductive types of work, to isolate tasks from authentic

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<sup>21</sup>The listed sources are specific to aural-skills education and have also been central sources for my present dissertation. Additionally, Buehrer cites constrictivist approaches to the pedagogy of music theory and analysis.



musical activities and to disregard the co-existence of multiple possible solutions or multiple possible strategies for the solving of musical tasks. In this dissertation, I will build further on this recent discussion.<sup>22</sup> Also outside this Anglo-American discussion, authors have voiced many similar viewpoints, such as criticism of the convention of guiding students towards single solutions and strategies (Comtet 2008), or the need to support learners to find their personal approaches to aural-skills learning (Bergby & Blix 2007, 22). I will return to these viewpoints in the later chapters of this dissertation.

The specific contribution I want to bring to the constructivist discussion with the present dissertation is an increasingly refined analysis of how musicians' habits of playing and singing contribute to the perceptual and analytical development in aural-skills education. While I largely agree with the previously cited authors' view of how aural-skills education needs to be developed to be meaningful to the students and congruent with current educational research, I believe that there are many issues specific to the nature of musical learning which still warrant closer study. Especially, I want to clarify how aural-skills education can be understood to contribute to the musical awareness that instrumentalists develop through their broader engagement in music. I will also suggest an increasingly cultural approach to aural-skills learning, which treats an individual musician's learning not as an isolated process but as a part of broader patterns of social participation. Such an explication will be my aim in Chapter 3.

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<sup>22</sup>Even though I focus this literature review on higher education, it is worthwhile to note that some aural-skills educators who also work with children and amateur musicians have recently drawn attention to many similar principles to those discussed by the previously referred constructivist authors. I would particularly mention the work of Nicholas Bannan (e.g. 2004), who has worked with a wide range of students in terms of age and musical skill and who had drawn attention to the bodily aspects of aural awareness. He has developed vocally based improvisatory activities ('Harmony Singing') that are suitable for aural-skills education and music-making in groups. His projects also exemplify the endeavour to bridge traditional aural-skills methods (e.g. solmisation) with an encouragement of students' creative musical contribution.

#### **2.2.4 Discussions on instrumentalists' skills and needs**

Of special interest for this research is how the conceptions of the nature of aural skills and their learning manifest in the authors' approach to instrumentalists' knowledge and their musical needs. Generally, even if a majority of aural-skills students in conservatories are instrumentalists, only a few texts on higher education or formal aural-skills courses specifically address the nature of instrumentalists' knowledge. Apparently, the usefulness of the traditional set of aural-skills tasks for instrumentalists seems to be an assumption that has often been perpetuated in the pedagogical tradition without question.<sup>23</sup>

The frequent references to 'inner hearing' as a way to define the goals of aural-skills education and to justify its relevance to instrumentalists deserve some attention. In numerous pedagogical texts, namely, authors rationalise aural-skills education by stressing the importance of singing for instrumentalists, and instrumentalists' need to anticipate the music they are playing. (Bullen 1878, 68–69; Gartenlaub 1999, 310; Hedges 1999, 42, 62–63.) Such rationalisations, however, often refer to the virtues of singing and aural anticipation in a rather broad and general way, and then go on to assume the usefulness of the specific sight-singing and dictation skills cultivated in aural-skills lessons. In other words, aural-skills education is justified through a very broad idea of 'inner hearing', while the pedagogical work that is suggested focuses on very specific aspects of music, with an emphasis on pitch and notation. The texts do not seem to make reference to the possibility that a musician's ability to anticipate music in more or less precise ways could be positive. Also noteworthy is that instrumentalists' knowledge, and their study of musical structures in connection to their instrument, has very often appeared in aural-skills pedagogues' texts through rather negative references: as instructions for students to practise without their instruments, or as references to instrumentalists' playing mechanically or unmusically (e.g. Hedges 1999, 31).

In recent decades, there seems to have been quite a clear shift in aural-skills literature towards positive references to instruments and instrumentalists' knowledge.

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<sup>23</sup>According to Paraczky (2009, 29–30), who has reviewed several nineteenth-century conservatory teachers' pedagogical texts, melodic dictation first became compulsory for singers, who were particularly seen as needing practice with notation, but it was soon also required from instrumentalists.

The many suggestions to use aural imitation and improvisation as alternatives or enrichments to dictation practice (see the previous section) are one example.<sup>24</sup> In many texts, such uses of the students' instruments have appeared as enrichments to otherwise rather traditional aural-skills curricula. A few schools and authors, however, have taken instrumentalists' knowledge and needs as a central premise for their planning of aural-skills courses. Of the previously mentioned 'constructivist' authors, attention to instrumentalists' needs has been given among researchers and educators associated with the Huddersfield Polytechnic: Michael Henson (1987a) and George Pratt (1987; 1998), and influenced by their work, Kate Covington and Mark Lochstampfor in the USA (Covington 1992; 1997; Covington & Lochstampfor 1994). Buehrer himself, in turn, has drawn on these authors for his personal adaptations of the use of instruments in aural-skills education (Buehrer 2000, 151–152). Common to all these authors is the idea that the students' instruments are for them means for making sense of music, which they can use to enhance their aural awareness of music by playing by ear, and by elaborating on given musical structures by varying them and improvising on them. They also suggest combining music technology and the students' use of their instruments through providing recorded music examples for the students' aural activities. As already mentioned in the previous chapter, playing by ear and improvisation with instruments are also included as an alternative to writing music down in the pedagogical suggestions given in connection to dictations.

In the Norwegian Academy of Music, several teachers have used both the students' instruments in practice and contributed to the theoretical understanding of the topic. Bergby (2007d, 193–194) expresses a perspective in which she takes the students' instrumental musicianship as the starting point for aural-skills education. According to her, the students' work on their instrument is often the most central part of their musicianship, and thereby also a way for aural skills education to make a connection to what is relevant and motivating for the students. She maintains that the

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<sup>24</sup>The use of keyboard work in aural-skills education, as such, is not new. In older materials, keyboard activities have sometimes been used in connection to dictation or other types of aural-skills activities, as revealed by textbooks and manuals (e.g. the bibliography of Ibberson 1983 and Hedges 1999, 37).

use of the students' instruments in aural-skills lessons enables them to develop their hearing *through* the instrument. (Bergby 1997d, 194.) A tight connection between auditive awareness and musical production, as pointed out by her, is central for such genres as folk and jazz music, in which music acquisition by ear is central, but should also be a goal for classical musicians. Indeed, the institutionalisation of jazz, popular and folk music education has also contributed to the somewhat changed approach to the role of instruments in aural-skills education. Jazz musicians especially have acknowledged the aural orientation on an instrument and instrumental improvisation as natural starting points of aural skills study, without reducing their conception of aural skills to structures which can be sung (Maceli 2009).

As a source of ideas and perspectives, I would also like to mention the potential relevance of work that has been done in connection to instrumental pedagogy, also concerning elementary levels. Even if not subsumed under the title 'aural skills', many pedagogues have developed approaches to instrumentalists' aural anticipation of music and music literacy – essential similar topics which are my interest here. Although a thorough review of it is therefore beyond the possibilities of this study, I find it important to highlight the potential of a future dialogue between these fields of study.

### **2.2.5 Aural-skills education in Finland**

At this point, it is useful to relate the previously described trends and issues to Finnish aural-skills education, which provided the context for my practitioner-research project. In Finland, aural-skills education is a compulsory part of the governmentally supported music education system from elementary to tertiary levels. In higher education, Finnish aural-skills education has, since the beginning of the twentieth century, followed international models and included sight-singing and dictation first as separate subjects and then as parts of aural-skills courses, which have undergone similar developments to those described in this chapter (e.g. Paraczky 2009, 31–32, 58). Regarding my research participants' backgrounds, however, the Finnish system of music schools deserves some attention. Due to an extensive network of state-supported music schools for children and young people, Finnish students usually enter

higher education with a background of 4–7 years of studies in a subject called ‘music theory and aural skills’ (after 2005 called ‘musiikin perusteet’ – ‘fundamentals of music’).<sup>25</sup> This education has been under considerable public criticism during the years that coincided with my working with the present project – the topics of criticism echoing those reviewed in this chapter (e.g. Heimonen 2002, 202; Tuovila 2003, 177–178, 232–234).<sup>26</sup> In a curriculum reform in 2002, the music schools received new guidelines for their curriculum, which suggest and even demand the teaching of aural skills through authentic music examples, practical activities such as harmonising, part-singing and improvisation, and making connections to the students’ instrumental studies (OPH 2002).

The tuition in ‘fundamentals of music’ in music schools, as well as aural-skills courses in higher education, typically consists of lessons once a week, and the students’ individual work. The typical group size is 7–14 students.

Regarding specific aural-skills methodology, the Finnish aural-skills courses have long followed international models in the dominance of sight singing and dictation, and up to the curriculum reform in 2002, isolated interval and chord recognitions tasks. The traditional activities had still dominated my research participants’ music-school studies. The new framework curriculum of 2002 has now replaced isolated recognition tasks by the aural analysis and transcription of recorded and performed music examples, and the study of harmony through various practical

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<sup>25</sup>The inclusion of the subject ‘fundamentals of music’ (before 2002, ‘music theory and aural skills’) in music-school curricula, is governed by the *framework curriculum for basic education in the arts*, given by the Finnish National Board of Education (OPH 2002). The historical development of the subject in music schools has been described in the master’s theses by Perälä (1993) and Jaakkola (2008). Regarding the development of aural skills in the curriculum of The Sibelius Academy, see Dahlström (1982, 39–40, 122, 170–171, 218) and Pajamo (2007, 20, 23, 44–45).

<sup>26</sup>The critical discussion on the theory and aural-skills component of music-school curricula has been documented in numerous articles in newspapers and magazines. The criticism and the following curriculum reform have also been the topic of several master-level theses (Heikkilä 1995; Palonen 1999; Lappalainen 2003; Jurvanen 2005; Jaakkola 2008). Children’s views of music-school education and also its aural-skills components are included in the longitudinal study by Tuovila (2003).

activities.<sup>27</sup> In more specific aural-skills methods, the Finnish materials and syllabi have long represented a very homophonic and vertical approach to harmony, dictation in several parts being rare in music-school courses. If solmisation is used, the system is relative solmisation that is very similar to the *tonic sol-fa* applied by Curwen (Rainbow 2007b and section 2.2.1). In the absence of numerical information, my estimation would be that less than a half of music schools use solmisation, with the majority using singing with a neutral syllable.

From an international perspective, Finnish music-school teachers can be considered highly educated, instrumental teachers commonly having a master's or bachelor's degree in music, including several years of pedagogical studies.<sup>28</sup> Teaching in music schools can also be considered well established and respected. (OPM 1998.) Aural skills and music theory, however, have tended to come behind instrumental teaching in the process of teachers' professionalisation, which means that aural-skills teachers have until recent years had more diverse teaching backgrounds and less stable positions.<sup>29</sup>

For pianists' aural-skills learning, broader changes in pianists' education are also relevant. During the very years of my working on this dissertation, music-school education has witnessed a clear growth in aurally based piano methods. Among the

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<sup>27</sup>The development of the practical activities involved in music-school courses is revealed by a comparison of the guidelines that the Finnish Association of Music Schools has given for the examination system in music schools (SML 1982 and 2005a). In the guidelines given in 2005, contextual and practically oriented activities have largely replaced the isolated recognition tasks that dominated the guidelines in 1982. For information about the music-schools syllabi in English, see SML (2011).

<sup>28</sup>Finnish instrumental teachers may have a master of music degree from the Sibelius Academy, normally involving two years of instrumental pedagogy, or a bachelor's degree from universities of applied sciences, where the teacher-education programmes contain several years of pedagogical studies, or up to the teachers who graduated in the 1990s, a teaching qualification from music conservatories (OPM 1998; see also Appendix A). Many instrumental teachers in music schools also have a master's degree in music education, which includes 60 credit points of educational studies, besides which the students also have studied special courses in the pedagogy of their instrument. (Sibelius Academy, Guide 2010–2011 for Foreign Students.)

<sup>29</sup>For the development of teachers' work in Finnish music schools, see Broman-Kananen (2005).

present participants, some reported as having started their piano studies through some forms of Suzuki oriented education, while others had been taught with the aid of scores. Since 2005, the recommendations given for the course contents in music schools also expect piano teachers to teach playing by ear, basic accompaniment using chord symbols and improvisatory activities, which are also included in many recent methods books (SML 2005b; Rikandi 2010). During my participants' music-school studies, specific courses in 'free piano' had already been available as a subject, which some participants had studied for a couple of years before entering higher education. Such courses normally involved the rudiments of interpreting chord symbols, accompaniment patterns in various popular styles, basic transposition, and to varying degrees, some playing by ear.

For international readers of the present research, I believe that the characteristics of Finnish aural-skills education mean that similar issues to those discussed internationally are mostly relevant here, too. Since my data-gathering (1998–2000) predated the curriculum reform, however, the research results need to be interpreted with the reservation that students are now likely to enter higher education on the basis of a different curriculum, which involves an increased use of authentic music examples and the study of harmony through practical and production-oriented activities. Even more than such curricular questions, I assume that present-day students' background are likely to be shaped by the growing role of Afro-American music in music schools and also in general music education (e.g. Väkevä 2006) – implications of which I will return to discuss in Chapter 7.

### **2.3 The perspective of this research**

With the previous review, my purpose was to describe the pedagogical tradition which also provided the background for my practitioner-research project. The traditional activities, goals and assumptions that have belonged to aural skills education internationally also characterised the students' previous studies, the contents and requirements of the course we went through, and even my own education and pedagogical knowledge as an aural-skills teacher. The research process, indeed, gradually made me increasingly conscious of the role of this tradition behind our

work. The literature review also suggests that similar experiences of less than optimal connection between instrumentalist students' needs and formal aural-skills education to those that motivated my practitioner-research project are common. Also the direction of improvement I sought by involving the students' main instrument and encouraging their self-directed learning has similarities with the solutions sought by several recent researchers and pedagogues.

While sharing the basic tenets of the authors who subscribe to constructivist educational theory, my aim in this research is to go further in clarifying the nature of the specifically musical aspects of aural-skills learning. So far, much of the constructivist discussion has so far relied on educational theory, which is not specific to music. My purpose, therefore, is to particularly address the relationship between musicians' productional awareness of music through their singing and playing, and the perceptual and analytical skills conventionally attended in aural-skills education. In other words, I ask how aural-skills education is related to performing musicians' previous knowledge, and how it can contribute to their musicianship. This also means that I will suggest an alternative viewpoint to assumptions that have prevailed in a broad body of previous research. In particular, I will subject to critical scrutiny the assumption that performing musicians will always benefit from the specific training of their music perception through analytical and written activities. The formulation of this critical argument will be my topic in the next chapter.

## SUMMARY

The education of music professionals conventionally includes specific aural-skills courses, which are intended for the development of the students' musical awareness and music literacy. Despite differences in nomenclature and contents, I consider it justified to speak of a shared tradition, which took much of its shape between the 1790s and 1870s. The characteristic activities have long been dictation, sight-singing and various recognitions tasks. Central sub-skills emphasised in pedagogical literature include the students' 'inner hearing', pitch location, harmonic, melodic and metric patterning, and analytical organisation of music. Since the 1980s, there has been growing critical discussion, which points at broad problems in aural-skills education and warrants a consideration of current knowledge on the active, meaning-oriented and interpretive nature of human learning. In this research, I continue the critical



discussion, with the special aim of addressing the relationship between aural-skills education and performing musicians' practical and nonverbal awareness of music.

### **3 Cultural habits of action as the foundation of aural awareness and music literacy**

As I described in the previous chapter, aural-skills education has an established position in musicians' education. It has, however, also raised quite a lot of critical discussion in recent years, and several authors have suggested that it should be increasingly informed by an awareness of the active and constructive nature of human learning. Many authors have pointed out the persistence of conventions that are problematic in the light of current educational research (section 2.2.3). Some topics of criticism include the tendency to over-emphasise explicit and symbolic knowledge, and to leave the students in a very receptive and reproductive role at the expense of their active musical contribution. Also criticised has been the convention of thought that musical skills reside and develop in individual students' minds only, and can be educated in isolation from the activities, instruments and social contexts in which the students are to act as future musicians.

In this chapter, my purpose is to suggest how aural-skills education can benefit from recent educational theory, which maintains that human learning is rooted in the interaction between people and their learning environment. I draw on educational, philosophical and cognitive theory, which emphasises action in human learning, and which treats the human body and mind as inseparable. My aim is to find a concept of aural-skills learning that is solid and justified in the light of recent educational theory, and which supports analytical discussion on the relationship between formal aural-skills education and the students' broader engagement in music. Such an integrated view, in my perception, requires an approach that is sensitive to the nonverbal and yet highly intentional and selective nature of all aural-skills learning. This also means that aural skills are understood not only as the product of specifically designed methods used in classrooms, but also as part of the students musical enculturation: their process of learning to participate, think and perceive music in different contexts and activities.

I will devote the first sections of this chapter to a review of literature (3.1–3.3), and in the latter ones, suggest a way of applying such an approach to aural-skills

learning (3.4–3.5). Firstly, I will review literature that sees human learning, perception and also conceptual thought as being rooted in action – and ultimately drawing on bodily action (3.1–3.2). After a general introduction to the theoretical approach, I will review some examples of how similar literature has been previously applied to music (3.3). In the last part of the chapter (3.4–3.5), I will apply this conception to aural-skills learning by returning to the sub-skills I presented in section 2.2.1, and interpreting them in a way that suggests connections between formal aural-skills education and the students’ broader engagement in music. To conclude the chapter, I will point at some issues that I see as deserving attention in pianists’ aural-skills education (3.5). These last sections of the chapter also justify some of the basic choices in the design of the practitioner research to be explained in the later chapters.

### **3.1 Action, embodiment and perception**

Lots of educational research and discussion over recent decades has centred on the active and selective nature of human learning. A central trend has also been to emphasise that lots of important learning goes on outside formal education (e.g. Lave & Wenger 1991; Folkestad 2006).<sup>30</sup> Within this broader stream, I draw in this research on a specific theoretical orientation, which I call the *action-oriented* perspective. There is a growing body of research, namely, which maintains that human perception and knowledge of the world are by their very nature dependent on action, and that basic patterns of human-environment interaction, similar to those which cover bodily action, continue to be active in adult age and also form the basis of abstract forms of thought. Central to this view is also the important role given to cultural tools, artefacts, and language and other symbols, which make the human mind functionally connected to the environment.

While individual theorists may differ in specific questions and use different terminology, I use the term *action-oriented* in this research for authors and theories

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<sup>30</sup>The approach I introduce here can be seen as one version of educational *constructivism* – a term used to describe a broad educational movement motivated by the idea of learners constructing their knowledge (e.g. Fosnot 2005). The term, however, has become so broadly used that it has lost much of its defining power. (For different interpretations, see e.g. Confrey 1995; Phillips 1995 and Marshall 1996.) For references to constructivism in aural-skills research, see Buehrer (2000) and section 2.2.3.

subscribing to a set of similar basic principles.<sup>31</sup> These basic principles are the vision of the human body and mind as being basically inseparable, a prominent place given for embodied action, cultural tools and artefacts, and pre-reflective knowledge, and the avoidance of a strict separation between human individuals and their environment.

While supported by a growing body of literature, the action-oriented approach differs from many cognitive theories that have explained human learning as the building of mental structures, which are thought to reside in individual students' minds.<sup>32</sup> Such theories have also dominated previous cognitive approaches to aural-skills learning. Here, on the contrary, I draw on literature which views learning as being based on skilful interaction between humans and their environment, which does not require symbols to develop, but instead provides a basis for symbolic skills. I will in the following explain the central tenets of such an approach, and introduce my central theoretical sources.

### **3.1.1 Habit and use: an action-oriented theory of meaning**

A growing number of cognitive researchers, philosophers and educational theorists have sought to explain human learning in a way that sees a continuity between the human body and mind, and also a continuity between individual and culture. This trend has also caused a revived interest in some earlier philosophers and psychologists who have expressed similar ideas, including the Soviet linguist and psychologist Lev Vygotsky, the American pragmatist John Dewey, and the French phenomenologist Maurice Merleau-Ponty.<sup>33</sup> In the present study, my central theoretical source is

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<sup>31</sup>To mention some more specific terms, Johnson (2007) calls his approach to meaning and cognition *embodiment view*, and Noë (2004) talks about an *enactive approach to perception*.

<sup>32</sup>In lots of cognitive research, learning is explained as the building of mental *representations*, which are thought to reside in individual minds. The term 'representation', however, is used with differing meanings, some of which differ radically from the action-oriented approach, while others are quite compatible with it. If representations are conceived as dynamic patterns of interaction between the learner and the environment, the approach is very close to the one I present here. For a discussion, see Johnson (2007, 117–121 and 130–134).

<sup>33</sup>For the continuity of body and mind in the referred authors' thinking, see e.g. Westerlund (2002, 68) and Väkevä (2004, 46). For the current relevance of Dewey, Merleau-Ponty and Vygotsky, see e.g.

literature that draws on the pragmatist philosophy of John Dewey. The Deweyan philosophy has had a strong influence on the philosophy of music education over the last fifteen years (section 3.3). Since aural skills as a research topic makes issues of music perception particularly central, I also combine the somewhat general philosophy of Dewey with more recent and more specific literature on the role of embodiment in human perception and knowledge.

A central theme in the work of Dewey is the interconnectedness of action and intellect. In his different texts, he repeatedly stresses how we only know the world through our active orientation towards it: by making plans and developing dispositions, anticipating the consequences of our actions, and receiving feedback from the environment. Owing to the philosophy of Charles Peirce, the concept of *habit* has a central place in his thinking. Both Peirce and Dewey stress how habits of action belong not only to mindless or routine behaviour, but are a constituent part of human knowledge. Habits of action mean that people are able to anticipate regularities in their environment, and also actively cope with both its stable and changing aspects. The ways in which we have learned to act in various circumstances are ways of knowing how the world is. (E.g. Dewey MW 9, 58–59; Kilpinen 2000, 15; Westerlund 2002, 38; Väkevä 2004, 38, 42.) In bodily action, the concrete environment resists human actions and thereby provides feedback, which enables people to refine their habits and thereby their knowledge of the world. A basically similar relationship between action and feedback also enables people to develop their habits and understanding as they interact with other human beings. By participating in shared activities and experiencing each other's responses and reactions, they learn what is suitable, sensible or appropriate in a given situation. (Westerlund 2002, 37–38; Määttänen 2009, 138–139.)

Habits also enable people to take cognitive distance from a given situation and think of events and objects which are not concretely present. Even a basic, recurring habit involves the acting person's awareness of what is likely to come, and the more adaptability and choice is involved in the activity, the more the actor needs to

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Määttänen (1993); Glassman (2001); Dreyfus (2002); Miettinen (2006a; 2006b) and Johnson (2007, x, 152–153).

anticipate and imagine possible courses of action (Määttänen 2009, 88–90).<sup>34</sup> As opposed to many other schools of thought, Peircean and Deweyan pragmatism maintains that habits, as the basic patterns of human–environment interaction, already enable such cognitive abilities as the capacity to abstract regularities and think of future events – without always requiring propositional thought. Also central is that perception is no sheer reception of information, but an interactive process which always involves the active participation of the perceiver (e.g. Dewey MW9, 151; Määttänen 1993, 30–31).

Peirce and Dewey also view that the capability of language and other symbols to convey meanings is built on the interaction between humans and their environment. For them, the meaning of a symbol is its use by a community of users. In Dewey’s famous example, the word ”hat” gains meanings both from concrete and linguistic uses: from the ways in which people use a hat as a concrete object and from ways in which they use the word ”hat”. (Dewey MW9, 20; see also Tiles 1988, 99; Westerlund 2002, 42–46; Määttänen 2009, 116.) The meaningfulness of language, therefore, is based on how language is used in complex human action, in which words derive their meanings both from concrete and symbolic uses (Määttänen 2009, 98).<sup>35</sup> Because action and social uses give meaning to language and other symbols, rather than vice versa, the Deweyan conception of meaning can also be extended to non-linguistic forms of expression (Määttänen 2010, 63–64). This manifoldness also means that our life is pervaded with cultural influences. Even when we are alone, we make use of tools and symbols inherited from the community around us, which thereby structure our thinking according to the categories and distinctions built in them (Johnson 2007, 151).

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<sup>34</sup>Dewey acknowledges how people’s habits may under certain conditions become routinised and rigid, and in his different texts discusses how it is possible to develop flexible and adaptive habits (e.g. Dewey MW9, 71). His ideas on cultivating people’s ongoing learning in work and social activities have been a central source for action-research methodology, which I will discuss in more detail in Chapter 4.

<sup>35</sup>The principle ‘meaning is use’ also links the Peircean and Deweyan philosophy with Wittgenstein’s late philosophy (Tiles 1988, 99; Määttänen 2005).

As the same principles of active anticipation and feedback cover both concrete action and symbolic forms of thought, the distinction between skills and knowledge is relative rather than categorical. Although people can develop their knowledge by learning linguistic definitions, rules and facts, the ability to participate and act intelligently in almost any human community requires that the participant learns to expect what kinds of linguistic uses are appropriate and to expect consequences and make judgements concerning the use of language (e.g. Lave & Wenger 1991, 105).

For the sake of convenience, I will use the term *knowledge* in this study as a broad term for the ability to anticipate regularities in the physical and social world, also including nonverbal forms. Correspondingly, the term *mind* is used for a functional entity that also involves the human body, as well as signs and tools external to the body when they are part of action.

### **3.1.2 Tools and symbols: shared cultural resources**

For the present research, with its focus on people's aural awareness and music literacy, a central question is how people make use of cultural symbols – such as musical notation – and appropriate them to their individual thinking. To explain the cultural origin of individual thinking, Dewey joins many other theorists who stress the role of tools and instruments, and make an analogy between concrete tools and symbols.<sup>36</sup> In comparison to forms of activity where people directly manipulate external objects, the use of a tool introduces to the activity an external object that enables some new functions. The tool can become the focus of reflection and remind the actor of the meanings involved in the activity: its object, its purpose, and one's own place and identity in the activity. (Dewey MW6, 42; LW1, 102; see also Määttänen 1993, 15; Bernhard 2007.)

According to the previously described pragmatist principle, a tool gains its meaning through use. Because tools serve cultural purposes, they also convey cultural knowledge. Unless the individual has invented a totally new tool, the material design of the tool is inherited from the culture. People also learn conventions on how to use

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<sup>36</sup>For the sake of clarity, I reserve the word *instrument* to musical instruments in this research, and use the word *tool* for nonmusical activities – even though many action-oriented authors also apply the word *instrument* for nonmusical uses in their texts.

the tools, what needs attention in action, and what is the place and responsibility of the actor. Much of the same can be said of linguistic and other symbols: even if their use does not involve concrete feedback from the environment in the way concrete tools do, they also gain their meanings from use, and their meanings also come to involve cultural distinctions, purposes and identities with human activities. (Määttänen 2005; Noë 2009, 78–81.)

A basic principle for Dewey, and for the Soviet psychologist Vygotsky, is that the same cultural tools, signs, and actions, which serve external and social action, are also employed in individual thinking. Vygotsky in particular has become famous for his accounts of how cognitive functions first appear between individuals and later become resources for individual thinking. As the basis of his study of *egocentric speech* in children, he argued that the gradual decrease in children's typical habit of speaking to themselves, when approaching school age, means that the child becomes able to use words and expressions in internal speech and no longer needs to speak aloud as much as before. (Vygotsky 1986, 30–31; Wertsch 1991, 88; John-Steiner 2007, 138.) He interprets this as one example of a more general principle: people first make use of cultural resources externally and socially, and gradually internalise them and thus become able to employ the same resources in their individual thinking. In recent applications of Vygotsky's work, the focus of interest has increasingly shifted to the processes whereby people also externalise their thinking through constructing externally visible, audible and tangible results: artefacts, tools, symbols and expressions (e.g. Lave & Wenger 1991, 47-49). From this perspective, the learning and use of existing cultural resources and the creative contribution and participation in culture are natural sides of the same process.<sup>37</sup>

The Deweyan and Vygotskian explanation of human cognitive capacities has been commended for its avoidance of some traditional dichotomies in the study of human thinking: the contrasts between external and internal functions and between concrete or embodied skills and abstract and symbolic thought (on Dewey, e.g. Johnson 2007, 7–8, 113, 121–123; on Vygotsky, del Rio & Alvarez 2007). The

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<sup>37</sup>On the relationship between Deweyan and Vygotskian theories on culturally mediated activity, see e.g. Glassman (2001) and Miettinen (2001; 2006a and 2006b).



concrete and the intellectual are united in the principle that tools, materials and artefacts can become empowered to refer to abstract ideas and also rich and profound dimensions such as human values and identities (e.g. Määttänen 2000). The common dichotomy between reproduction and creative thinking is avoided as well. Since the learning of cultural resources happens through action and use, it is natural that individuals also contribute to the social resources in their turn. The possibility of personal contribution to culture is therefore principally involved in the learning process from the very beginning, although the actor's contribution and responsibility naturally tend to increase with increasing experience. (Lave & Wenger 1991, 51–54; Bakhurst 2007, 73.)

### **3.1.3 Preconscious action and complex human awareness**

While recent cognitive research has devoted increasing attention to how embodiment shapes human perception and thinking, a prevalent view is that the influence of embodiment largely works outside the reach of people's conscious reflection. To a large extent, people experience the consequences of embodied action in other domains of experience: their bodily actions shape the way in which they see, conceptualise and talk about the world. (E.g. Johnson 2007, 3–7.) Influential authors on such a role of embodiment are George Lakoff and Mark Johnson, the latter of whom also refers to Dewey and other Chicago pragmatists in his latest book (Johnson 2007). A central idea for Lakoff and Johnson is a principle called *cross-domain mapping*: that people have the capacity to make sense of abstract domains of experience by conceiving them in terms of more concrete ones. As described by Johnson (2007), people's basic movements give rise to *image schemas*: recurring patterns of organism–environment interaction, such as source–path–goal, up–down (verticality), or into–out of (Johnson 2007, 21, 135–154).<sup>38</sup> These basic shapes of human experience, according to Johnson, also give rise to abstract concepts through *conceptual metaphors* (ibid. 176–195): people experience abstract entities and ideas by metaphorically connecting them to

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<sup>38</sup>In his latest book, Johnson (2007) discusses concrete action and 'human–environment coupling' in great detail. The earlier books by Lakoff and Johnson are more concentrated on conceptual metaphors. For the development of their ideas, see the afterword to their book *Metaphors We Live By*, originally published in 1980 (Lakoff & Johnson 2003, 243–276).

concrete ones. Some examples, which Johnson expresses as sentences, are *Affection is warmth*, *Important is big* and *More is up/Less is down*. According to Johnson, the connection to embodied action is far more than a purely linguistic device: it means that our bodies are also actively involved in abstract thought.<sup>39</sup> As a consequence, conceptualisation involves humans in a holistic way, as embodied beings whose cognition largely depends on what the authors call unconscious processing. This profoundness also makes it understandable that conceptual change can be a demanding process, requiring people to learn to employ alternative metaphors to the accustomed ones and thereby also restructure their use of bodily and pre-reflective layers of experience (Lakoff & Johnson 1999, 536–538, 556).

The constitutive role of embodiment in human experience and thought, according to Johnson, means that bodily action even shapes those perceptual experiences that we may not consciously feel as being related to movement. Even when embodied action is not consciously attended, it works as a constituting and organising force behind human perception (Johnson 2007, 136–137). An author who has already proposed very similar viewpoints in the mid 1940s is the phenomenologist Merleau-Ponty. His central concept was ‘motor intentionality’: the active orientation towards the environment, which is perpetually happening in our bodies, and which is “concealed behind the objective world which it helps to build up” (Merleau-Ponty 2002, 159). Merleau-Ponty’s principles have also been connected to empirical research on visual perception by Alva Noë, who has demonstrated how the variance of sensory stimulation as a function of movement is central to the organisation of our visual experiences (Noë 2009, 63).<sup>40</sup> As I will return to discuss, such theories are very congruent with musicians’ experiences of how aural perception can be sharpened through bodily actions: by learning to play and sing (3.4).

To summarise, such authors as Johnson, Noë and Merleau-Ponty hold the view that human perception, knowledge and understanding are profoundly shaped by

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<sup>39</sup>As Johnson describes, there is some, yet not consistent, evidence on how conceptual metaphors are also supported by brain mechanisms, such as neural mapping between sensorimotor brain areas and other areas involved in thinking (Johnson 2007, 167).

<sup>40</sup>For the relevance of Merleau-Ponty’s ideas on embodiment for current cognitive research and philosophy, see Noë (2004, 17) and Määttänen (2010, 61–62).

embodiment in a way that is largely outside the reach of conscious awareness. There also seem to be rich and diverse connections between more and less conscious learning processes, and both theoretical and empirical support for people's capability of making use of various layers of their awareness in learning. As I will suggest in 3.4, the subtle interplay between concrete and abstract thought, and between more and less conscious layers of experience, is of special relevance in connection to music, and especially in connection to aural-skills learning.

#### **3.1.4 Experience, symbols and images: some clarifications**

At this point, it is useful to make some clarifications, and also some comparisons between the action-oriented learning concept that I have just described, and some conventions of thought which have been typical in aural-skills pedagogy. In general, the described action-oriented theorists emphasise how experience is not sheer perception, and perception is not sheer reception of information (e.g. Noë 2004, 1–3; Määttänen 2009, 42–43). Nor does perception unequivocally precede action in the working of the human mind, but people's habits and anticipated actions shape perception and imagery through cyclic, interactive processes. The action-oriented perspective, therefore, does not support the idea that a separate practice of students' perceptual skills would be necessary before skilful practical action can take place – an assumption that has frequently appeared in connection with aural-skills education. Rather, perception and action are two sides of the same process, and because of their interconnected nature, it appears quite logical to see that they are also best taught together. Their interconnectedness also means that there is no such a thing as neutral and objective perception. People always perceive the world for some purpose, which means that the perception is shaped by their previous habits and current intentions and expectations.

It is also important to clarify how Deweyan philosophy does not mean a straightforward recommendation to use as much concrete action as possible, even though his ideas have sometimes been mistakenly connected to shallow and simplistic interpretations of a 'learning by doing' principle (Ross 2003, xxiv). Such a misconception easily results from a limited interpretation of embodiment, which assumes that embodiment in learning and education can only work through a conscious

reflection of one's bodily experience (O'Loughlin 1998). On the contrary, symbols and symbolic thought occupy a central part in Deweyan philosophy, as a means to enable people to plan, anticipate and make experiments in the absence of overt action. Such application of symbols, according to him, can extend human learning to situations where direct experimentation and feedback would be impossible or unwise. Symbols enable people to 'act without acting', to conduct experiments in their imagination. (Dewey LW4, 122.) Even here, the power of symbols to transcend the particular context is ultimately based on the breadth of habits. Symbols can be used for reflectively bringing together experiences from different environments, but this power is only realised to the extent that the symbols are really used in multiple contexts. Lave and Wenger, in turn, state: "The generality of any form of knowledge always lies in the power to renegotiate the meaning of the past and future in constructing the meaning of present circumstances" (Lave & Wenger 1991, 34).

Just as symbols gain their meaning in action, action is also a constitutive of mental images – a topic that is central for aural-skills pedagogy (3.4). From the action-oriented viewpoint, people's capacity for mental imagery is based on their anticipation of perception. Just like perception, therefore, imagery is shaped by action: images are anticipations of what one would perceive as a consequence of a certain way of acting.<sup>41</sup> This view means that imagining something is not a process of connecting separate, nonmaterial entities in the mind to objects or situations in external reality. Rather, images are in themselves a way in which people experience their constant interaction with their environment. (Määttänen 1993, 82.)

### **3.2 Tacit knowledge and formal education**

To summarise the previous text, action-oriented theorists have stressed how human learning relies very much on shared action with other people, and involves many layers of awareness, only some of which the actor can consciously access. Implications of this view have raised vivid discussion in connection to traditional

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<sup>41</sup>As expressed by Noë, who has studied the relationship between visual perception and concrete action, "perceiving is constituted by the exercise of a range of sensorimotor skills" (2004, 90).

academic subjects, but appear to be even more relevant in a field such as music, in which nonverbal action and sensitive perception obviously play a central role. Generally, the action-oriented view of human learning casts critical light on attempts to educate people through explicit rules and instructions, or to develop their perceptual skills as an isolated goal. Rather, several authors have emphasised how important it is that learners have the chance to participate in authentic<sup>42</sup>, purposeful activities together with more experienced actors. By acting themselves and observing how others act, they develop an ability to see what is relevant in a given situation: they develop field-specific knowledge and perceptual skills, which often cannot be put into words. I view such perspectives to be of special relevance for aural-skills education, which has often been criticised for attempts to teach conceptual knowledge or to train the students' perception in isolation from a meaningful task and relevant community of actors.

Dewey was among the authors who emphasised how people's joint activity and shared use of materials, tools and signs convey cultural meanings beyond what can be put into words (e.g. Dewey MW9, 33–35). Aside from him, authors whose work has been influential are Michael Polanyi, whose concept *tacit knowledge* has become well known, and Donald Schön, whose notion of *reflection-in-action* has influenced education research, action research, and music education. Jean Lave and Etienne Wenger, furthermore, have discussed how people learn through *legitimate peripheral participation* in human communities, and Hubert and Stuart Dreyfus critically discussed the relationship of explicit and intuitive knowledge in the development of human skill and expertise. Besides these authors, I will also review some critical discussions on how formal education can best contribute to students' learning, and relate to the broader processes of knowledge perpetuation in society.

### **3.2.1 Tacit knowledge, reflection-in-action and communities of practice**

The term *tacit knowledge* has become popular when describing people's ability to act and make judgements that they cannot explain or justify with words. The term

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<sup>42</sup>I use the expression *authentic* in this research to denote musical or other activities which are not only constructed for educational purposes, but in which people engage for their own sake. Naturally, there is no strict border between authentic and nonauthentic, as many socially respected activities may also have more or less explicit educational purposes.

originated in Michael Polanyi's critique of positivist ideas, wherein scientific knowledge could only be based on unequivocal, objectively verifiable observations. He described in great detail how even such fields as physics, often regarded as extremely rigorous and objective, rely on skills of interpreting and judging evidence, which people can only learn by taking part in the activity and hence learning to make interpretations and decisions on the basis of various data and materials in cooperation with more experienced researchers. (Polanyi 1998; originally published in 1958.) The shared interpretation of situations with more experienced actors is also at the core of the writings of Donald Schön (1983; 1987) on professional skills and the education of professionals. His examples cover various fields such as medicine, architecture, teaching, and even playing the piano, in which verbal instructions, rules and principles seem to have rather limited applicability in the education of professionals. Instead, Schön emphasises the joint interpretation of situations with more experienced actors as the core of professional education. Besides referring to the concept of tacit knowledge by Polanyi (Schön 1983, 52), Schön distinguishes between different types of thinking, which are involved in skilful professional action. His notion of *knowing-in-action* refers to knowledge which is tacit and implicit in skilful action, while *reflection-in-action* means a type of thinking that is often elicited when the action needs correction, adjustment or special alertness, and which occurs during action but not necessarily through words. As one of his examples, he mentions good jazz musicians improvising together. Furthermore, professionals may also stop and *reflect on action*. (Ibid. 49–55.)

For Polanyi and Schön alike, exclusive to experienced practitioners is the ability to notice in various situations, amidst an abundance of information, those features that are essential for the action. The largely nonverbal knowledge that enables such judgement cannot be formulated into rules or descriptions, which would be meaningful when people are away from the situations. Instead, central parts of professional knowledge, according to Schön, have to be learned by entering the situations, making judgements, and getting help from more experienced actors. As the most effective setting for educating professionals, he suggests a 'reflective practicum' in which students mainly learn by doing, with the help of coaching (Schön 1987, xii, 19–20).

A further viewpoint on the interplay of more and less conscious layers of awareness, is the much-discussed model of human skill acquisition by Hubert and Stuart Dreyfus (Dreyfus & Dreyfus 1986). By combining their expertise in philosophy, cognitive research and technology, Dreyfus suggest how people's learning or various skills tends to proceed through five stages – whether chess, driving, or the ability to cope in various everyday situations. In their model, in fact, skill acquisition does benefit from explicit rules at the very beginning stages: by following them, the beginner can start to accumulate the practical experience which then builds the core of the skill (ibid. 21–22). By the time they reach an expert stage, however, actors no longer respond to isolated features, but instead make judgements on the whole situation – in a holistic way they often cannot verbalise (ibid. 30–35).

Central for the Dreyfus' model is the actor's developing emotional involvement with the task: novices often cannot tell what is relevant in the situation, experienced beginners tend to feel overwhelmed with demands, but competent and expert actors' involvement is natural and guides them to relevant perceptions and judgements. Novices in different fields are usually first instructed by providing rules and referring to traits of the situation which should be attended. This initial stage, requiring lots of conscious control, sets demands for the learner's memory and attention. As the experience develops, the use of explicit rules is gradually replaced by an ability to make holistic judgements, where the actor is no longer responding to isolated traits but to the whole situation. This ability to find appropriate actions or make adjustments on the basis of holistic judgement is, in Dreyfus's account, dependent on the actor's involvement and sense of responsibility for the task pursued.

The shared interpretation of situations with more experienced actors is also central for Lave and Wenger (1991). Through the concept *legitimate peripheral participation*, they described a process of learning in which newcomers enter a social practice by taking part in tasks of minor responsibility, and in fortunate circumstances, gradually move towards increasing responsibility. They also point out, however, how possibilities for a newcomer to move towards increasing participation are not automatic and obvious. Instead, the unequal relationships of power that belong

to unequal participation also bring about tensions and sometimes even struggles for roles and opportunities. (Ibid. 100–104.)

Common to the reviewed literature is the view that people acquire cultural resources by actively participating in and contributing to meaningful action. The authors also stress the interconnectedness of the intellectual and emotional aspects of learning. Sharing the common endeavour and feeling a sense of interest and responsibility guides people's perception and judgement. The ability to judge situations is connected to skilful actors' involvement with the task, and a feeling of how it is appropriate to act in various situations – even when the actors cannot justify their judgments through words (Dreyfus & Dreyfus 1986, 34).

### **3.2.2 Communities of formal education**

Action-oriented authors have often discussed formal education in a rather critical tone. Because learning is always situated in a social and cultural context, formal education has no privilege or special power to offer knowledge that would be free from the particular contexts of its acquisition. Even though formal education provides people with communities of learning, in which they develop tacit knowledge of what is appropriate to do, as well how it is possible to cope in various situations and what kind of information is relevant. Because the learners' responsibility and involvement tend to be different in formal education than elsewhere, several authors have noted the danger that instructional contexts create knowledge and skills which are not really relevant to the contexts in which the students might later need them (e.g. Dewey MW9, 45; Lave & Wenger 1991, 99–100).

Generally, action-oriented authors have maintained that formal education can best benefit the students by cultivating their skills in asking questions and posing problems – instead of attempting to deliver static contents.<sup>43</sup> According to them, the processes whereby learners acquire knowledge are basically similar in formal contexts and elsewhere, and are crucially dependent on the learners' possibility to act together and benefit from the knowledge of more experienced actors. Formal education can,

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<sup>43</sup>I will return to specific pedagogical applications of the Deweyan ideals for fostering the students' active and inquiring learning in Chapter 9.



however, offer the students activities and types of participation that are broader than those their social group or other situations would allow them to access informally (Dewey MW9, 25–26; Westerlund 2002, 204). The multiplicity of activities in the surrounding world provides material for formal education, but it also puts educators in the position of making ethical and political choices regarding what kinds of contents and problems to offer their students (Väkevä 2004, 179).

The emphasis on processes and interaction rather than fixed contents was also central to Dewey's conception of curriculum. Even in the choice of specific subject matter, he maintained that the students' process of inquiry and relationship to the activities of the surrounding society are central elements (e.g. Dewey MW II, 279). A similar view that a curriculum should be conceived in a much broader way than as a list of contents and skills to be taught is echoed in several more recent authors' work, including the influential action researcher Lawrence Stenhouse (1975; 1989, 67).<sup>44</sup>

When applying Deweyan ideas to present-day students' learning, furthermore, it is worth remembering how the social context for learning is much more profound than the momentary social situation wherein people act (Lave & Wenger 1991, 54–57). Even if people are alone, they make use of language, images, gestures and other resources provided by the culture. The social contexts that influences present-day music students' thinking, furthermore, can extend in time and place far beyond the momentary situation. As the students' interviews suggested, the social models for musicianship which were central to their thinking were also communicated through recordings, books and films, and musicians in very distant places and even distant times compared to our classroom.

### **3.3 Action-oriented perspectives on thinking and learning in music**

The previously reviewed, action-oriented literature has also influenced research in musicology, music theory and music education philosophy. Before going into more specific questions of aural-skills pedagogy, I consider it useful to briefly introduce some topics in this discussion, which has also touched the role and function of theoretical studies and skills in music. Also in the realm of music, action-oriented

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<sup>44</sup>See also Lave & Wenger (1991, 97); Jorgensen (2002) and sections 9.1 and 10.2.

theorists have criticised overly abstract and individualistic conceptions of human thinking and learning, and have instead stressed the connection between intellectual skills and concrete action, and between the individual experience and culture.

In his recent book *The meaning of the body* (2007), the already mentioned Mark Johnson suggests that music and other arts are a paradigm example of the processes whereby people generally experience meaning: they perceive the world as meaningful and structured. Criticising many previous theories that limit meaning to the linguistic and propositional realm, he suggests instead that the core of human meaning can be found in basic shapes and qualities of movement and people's bodily engagement with their environment. Above all, he stresses the goal-oriented nature of bodily action: the striving for a goal and fulfilment that give the basic shapes to human meaningful experiences. He is one of the recent authors to have drawn on Dewey's concept of aesthetic experience, which according to Dewey is not distinct from people's practical interests and everyday actions. Rather, Johnson maintains that music, other arts and human meaning-making generally draw on people's capacities to connect concrete and abstract levels of experience. (Johnson 2007, 209–262; see also Väkevä 2004, 264–271.)

In music theory, several authors have drawn on the theories of Lakoff and Johnson, and have pointed out how even very abstract conceptualisations of music draw on movement and embodiment. Even such basic ideas as the notion of musical tension, or the whole system of conceptualising pitch as height, can be seen as being based on *conceptual metaphors* and *cross-domain mapping* (3.1.3): conceiving music in terms of qualities and dimensions that are borrowed from another domain of experience (Saslaw 1996; Zbikowski 1997).

The Deweyan philosophy and his conception of aesthetic experience have received the broadest and most direct applications in philosophy of music education, especially within the so called *praxialist* movement, which became known in the music education community mainly through the book by David Elliott (1995).<sup>45</sup> Praxialism arose out of criticism of philosophical approaches of music education, which

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<sup>45</sup>The term praxialism was first introduced by Philip Alperson, see Westerlund (2002) and Westerlund & Väkevä (2009).

attempted to limit the value and meaning of music to composed works of music, and separate them from practical interests and social processes of meaning-making. Instead, authors calling themselves praxialists emphasised the nature of music as a social and cultural activity, *praxis*. Their chief tenet has been that students' participation in practical music-making such as performing, improvisation, composition and arrangement is intrinsically valuable, and represents a high level of intellectual involvement, which is not necessarily dependent on propositional thought. (E.g. Westerlund 2002; Westerlund & Väkevä 2009). While this discussion has so far mainly targeted general music education in schools, the philosophical arguments for the priority of action over description in music are consistent with the approach I suggest in this research: even with aspiring professionals, the benefit students will get from analytical skills in music is dependent on its power to connect to the meanings of music that manifest in practical and cultural music-making. In this research, the praxialist approach has also contributed to my view of the cultural nature of pianistic musicianship, which I will discuss in Chapter 7.

While the previous literature emphasised sources of meaning that are basically available to all people through their human bodies and everyday experience, aural-skills education concerns perceptual and conceptual skills, which people derive from specific production-based experience in music. In ethnomusicology, Greg Downey (2002) has applied the embodiment theories of Merleau-Ponty to describe how the repertory of movements shared by group of people also creates culturally specific ways of 'hearing' music. The human body is attuned to culturally specific ways of perceiving and anticipating music: 'hearing', which also involves movement in space and several sensory modalities (Downey 2002). In connection to Western classical music, the music theorist Nicholas Cook (1989; 1990) has discussed how many of the skills of 'hearing' which are valued among musicians are actually derived from means of producing music: especially performing it. When people talk about the 'hearing' of music as a skill, they often refer to experiences where sound has been connected to visual or kinaesthetic modalities. Especially in connection to aural skills, expressions such as 'hearing a fifth', or 'hearing chord progressions' are often used in situations in

which the aural experience is combined with notations or instruments. In such cases, much of musicians' ability to make aural discriminations and judgements can be actually said to be based on the use of other domains of experience to refine and articulate the aural domain.<sup>46</sup> While aural-skills education is not his main topic, Cook describes it in a way that is very much congruent with my approach here: as a form of education in which people are taught to use habits and symbols derived from music production for their perception and analytical awareness of music.

Probably the application of action-oriented theory that is closest to the present research in topic, is the analysis of embodiment in Dalcroze eurhythmics by Marja-Leena Juntunen (2004) on the basis of the theories of Merleau-Ponty and Lakoff & Johnson. She describes how Dalcroze eurhythmics lead students, through imitated and improvised movement, to develop habits that attune the body-mind into increasingly refined perceptions of music. Such 'bodily knowing', as she calls it, largely happens on a pre-reflective level (Juntunen 2004, 68–70). Additionally, Dalcroze eurhythmics uses the conscious reflection of movement as a pedagogical tool (ibid. 69–70).

### **3.4 Instrumentalists' aural-skills education: sub-skills in the light of habit-oriented literature**

Even if the previously referred action-oriented literature has gained increasing attention in music education research and also some aspects of it in music theory, the research and pedagogy of aural skills have not been really influenced by this discussion.<sup>47</sup> Yet I believe that the action-oriented perspective could offer a way

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<sup>46</sup>Cook's texts, indeed, were one of the incentives for the interest in metaphor theory among music theorists (Zbikowski 1997; 1998). The later discussion on metaphors, however, has mostly concerned the nature of music theory and music analysis and not so much performing musicians' work, leaving the most concrete descriptions of musicians' practical activities to be found in Cook's earlier texts.

<sup>47</sup>As far as I know, there are some studies that build on the previously cited action-oriented literature and address topics that are related to aural-skills education, such as the previously mentioned application of Merleau-Ponty's theory of embodiment to Dalcroze eurhythmics by Juntunen (2004). Some aural-skills researchers, too, grant movement a central role in their explanations of mechanisms of aural-skills learning, even though their theoretical approaches differ from my present one (e.g. Davidson, Scripp & Meyaard 1988.) In most other texts, movement and concrete action are

through some of the problems and difficulties that I pointed out in Chapter 2 as typical in aural-skills education. As I described (2.2), aural-skills courses have long been a part of instrumentalists' education, but the pedagogical tradition has rarely addressed the nature of instrumentalists' knowledge in a very thorough way, or sought a conscious interaction with it. While authors have recognised that musicians' perception, production and imagery of music are in practice connected, their conceptualisations of aural skills have rarely been very explicit about the nature of this connection. There also seems to be a tendency to ignore the contextual nature of aural skills and to assume a too broad applicability of skills that students develop in formal contexts, and a tendency to over-emphasise reproductive tasks at the expense of the students' personal contribution.

In the following, I will suggest how action-oriented theory offers a way past many of the previously noted problems: a way to clarify what aural-skills education can offer instrumentalists, and also a basis for understanding the contextual nature of aural skills. I will return to the set of sub-skills that I described in section 2.2.1 as the typical goals and content of aural-skills pedagogy: 1. 'inner hearing', 2. pitch location, 3. harmonic, melodic and metric patterning and 4. analytical organisation. From the action-oriented viewpoint, the 'inner hearing', pitch location, and to a large extent the patterning of music, can be understood so that they are based on musicians' ability to anticipate music production: playing and singing. This view helps to pose some further critical questions to traditional aural-skills education. I will particularly address the relationship between the traditionally favoured approach to aural-skills education, which I will call the *vocal-analytical* approach, and pianists' typical habits of action. I will also point out the contrast between the rather reproductive practice, which has been typical for aural-skills education, and musicians' needs to learn to contribute their own musical solutions.

When referring to pianists' activities in the following, I use the term *playing by ear* for situations in which the actor hears some music, or knows the music from

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acknowledged as important for practical pedagogy, but are treated as being distinct from the knowledge students develop. Additionally, several Finnish music educators have addressed aural-skills education among children and young people in their master's level theses and have drawn on praxialist theory (e.g. Helve 2010).

previous hearings, and discovers how to play it on an instrument (McPherson 1995, 147; Musco 2010, 49–50). This term, as well as *learning by ear*, is often used in musical genres, which also assume that the aural rendition can be somewhat free and involve elements of *improvisation*. I also sometimes use *aural imitation* as a partly overlapping term, which however assumes that the actor will pursue a reproduction of the aural model that is as accurate as possible. All these terms assume that the actor finds the movements and instrument positions without visual or verbal cues (Musco 2010, 50). If the actor receives visual or verbal guidance for finding the positions on the instrument, as sometimes happens in elementary pedagogy or when students learn music by hearing and watching other musicians, I simply refer to the activity as *learning without notation*. Besides playing concretely, musicians may also demonstrate a related skill of *mentally projecting* music onto the keyboard, and ‘hearing’ keyboard positions even without playing aloud.

By *playing from memory*, I refer to the playing by heart of music that has originally been learned with a score. I sometimes also use *aural transposition on an instrument* for activities in which the player finds by ear how the music can be played in different keys, even though the music might originally have been learned with scores. By the term *score-mediated learning*, I refer in a broad way to the students’ learning of music while using a score, which often covers a long period of learning a musical composition and which may include various phases of work. The term *score*, in turn, refers in this research to piano music fully written out in standard notation.

### **3.4.1 ‘Inner hearing’: direct and anticipated regulation of sound**

As previously noted (2.2.1), aural-skills educators broadly consider that a central sub-skill to be attended to in their courses is musicians’ ‘inner hearing’ of music: their ability to mentally anticipate music which is not present. I follow here the broad use of the term, which does not necessarily require a connection to notation or other symbols (see 2.2.1). If ‘inner hearing’ has been theoretically explained, the convention has been to conceive it as a mental skill which guides musical action, but which is itself separate from bodily action.<sup>48</sup> Drawing on the previously cited action-

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<sup>48</sup>A example of text which portrays a type of translation process between internal states and concrete audible music-making is the explanation by Hedges (1999, 37): “Ideally speaking, through

oriented perspective, however, it is possible to conceive a tighter relationship between bodily and mental processes. What people experience as ‘inner hearing’, namely, can be conceived as anticipated music production in itself. People first produce music concretely, which already involves anticipation and feedback as with any action. With practice, they can internalise the connection between action and feedback so that they no longer need the audible sound. ‘Inner hearing’, so explained, can be seen as one manifestation of the principle that images are anticipated actions (section 3.1.4).

If we return to the pedagogical literature that I reviewed in section 2.2.1, traditional aural-skills methods quite regularly approach the students’ ‘inner hearing’ by first having the students produce musical sound by singing and playing, and gradually guiding them to anticipate the sound without overt action and audible feedback. The shift from concrete to mental action is typically involved in both directions of work that are conventionally involved in aural-skills education: *sound to symbols*, and *symbols to sound* (section 2.2.2). When notating or analysing music through hearing, the students will often first imitate melodic or rhythmic patterns aloud by singing or tapping, and then learn to write and analyse without such overt action. In sight-singing, teachers often guide their students to first sing motives aloud, but then also to do the same silently.<sup>49</sup>

From the action-oriented viewpoint, the production of musical sound is not only an intermediate stage on the way to the learning of ‘inner hearing’. Instead, both cognitive literature, which I cited in 3.1.3 (e.g. Noë 2004; Johnson 2007), and the research, which stressed the embodied nature of musicians’ learning (3.3), suggests that habits of sound production continue to be involved when people mentally hear music. In the concrete production of sound, namely, the person has made an important connection and learned to regulate musical sound through movement.

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sightsinging students learn to externalise their internal sense of a given passage or written musical notation with their voices. Through dictation they learn to externalise their internal sense of a given passage of sounding music by recording it in musical notation.”

<sup>49</sup>The process of guiding students from concrete to mental action can be followed in many of the pedagogical references which I mentioned in section 2.2.1, such as the sources on Dalcroze, Orff and Kodály pedagogy as well as the advice which Klonoski (1998; 2003; 2006) and Covington (2005) have given for adults’ education.

Changes in movements affect changes in sound— for example in pitch, dynamics or timbre. This co-variance means that people can learn to experience changes in audible music through movement, and also other modalities involved in music production. For example, music can be ‘heard’ as consisting of sung phrases, or as ‘going up’ on their instrument. This way, people project to the music qualities and structure that are actually derived from music production. If one studies pedagogical materials and musicians’ learning processes, it is even possible to say that these other modalities are indispensable for the mental control of music which is essential in ‘inner hearing’: the ability to activate and shape musical images in controlled ways. In the terms of Johnson, it is therefore possible to say that ‘inner hearing’ is essentially based on *cross-domain mapping* (see 3.1.3 and 3.3), in which the abstract aural experience of music obtains qualities from more concrete domains of experience. Even though the learners may not be consciously attending to the movement, it nevertheless contributes to the musical dimension being perceived more intensively, or even brings categories or structures to the musical experience.<sup>50</sup>

A central idea in many areas of music pedagogy is that learning to imitate music or otherwise join in music-making by ear refines people’s music perception. Teachers’ practical experience in this area has recently gained new support from neurocognitive research, which suggests that the association of movement to musical sound strengthens the perception of sound.<sup>51</sup> Learning music by ear, furthermore, involves more than a sheer association between movement and sound: the control of sound by movement so that variations of movement create variations of musical sound. This co-variance also enables people to learn to analyse musical sound in terms of what kinds

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<sup>50</sup>The nonconscious influence of movement on what people consciously perceive as aural experiences has been discussed and exemplified by Sudnow (1976, 43–45); Cook (1990) and Downey (2002).

<sup>51</sup>For some examples of pedagogical sources that emphasise aural imitation or playing by ear from very different pedagogical viewpoints (Orff pedagogy, aural-skills education, jazz education), see e.g. Frazee & Kreuter 1987; Kaiser 1999; 2000 and Maceli 2009, 4. In neurocognitive research, the influence of embodied action on perception, and also on people’s ability to communicate through concrete action, has recently gained support from research on so called *mirror neurons*. This neural system becomes activated both when people perform actions themselves, and when they perceive others conducting similar actions. (Johnson 2007, 161; in music, see Lahav, Saltzman & Schlaug 2007.)



of movements would produce corresponding sonic patterns. This basic type of ‘aural analysis in action’ is involved in such activities as learning to imitate rhythmic patterns, or learning to sing a song by rote. This kind of aural analysis, however, rarely involves explicit analytic questions, or appears to the actors as a very conscious analytical activity. Rather, people already engage in a similar kind of aural analysis when learning to speak their mother tongue. From early childhood, all of us have learned to imitate spoken patterns – on the basis of pure listening and speaking.

The imitation of music by singing and playing actually seems to offer, already in itself, much of the kind of refinement in people’s perceptual skills that people commonly associate with aural-skills learning as a whole. Aside from imitating music, people may also develop the connection between bodily habits and expected musical sound by improvisation and exploration of sound: they may first create improvisatory sound and then intentionally start to pursue some patterns that they find desirable. Jazz educators, in particular, often emphasise how imitation and improvisation are two complementary sides of musician’s learning (see e.g. Maceli 2009, 4). A similar idea is also behind the recent aural-skills literature which suggests the use of improvisation and which I cited in section 2.2.3.<sup>52</sup>

Even though learning by ear draws on similar mechanisms as learning one’s mother tongue, not all educated musicians are strong in such learning. If they have become used to learning music through notation, they have not necessarily gained practice in the previously described type of ‘aural analysis in action’, at least not to the degree that would enable them to learn by ear anything close to the complex music they typically practise. Many educators, therefore, maintain that learning music by ear needs practice even among advanced musicians (Brockmann 2009, 21–22).

It is also worth noting that the idea of musical images as anticipated actions applies to a broader variety of experiences than those that are typically cultivated in

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<sup>52</sup>The specific music education that is provided in various *music and movement* subjects also draws on somewhat similar processes to those I discuss here, and can also be supported by the action-oriented theory (Juntunen 2004). People can also learn to make sense of heard music through movement. Unless the moving person also makes audible sound, however, the movement does not regulate sound in the sense that sound would change as a result of movement.

aural-skills courses. As valuably pointed out by the previously mentioned texts by Cook (1989; 1990), a large number of people have skills of imagining and anticipating music without having specific education in music, or specific skills in playing or singing. Still, the process which Johnson calls *cross-domain mapping* has relevance here: the skills of consciously controlling and shaping one's imagery seem to occur very much through other modalities than hearing alone. Even with musicians, visual and narrative connotations are a central part of musical imagery. (Cook 1990.) Furthermore, musicians who have primarily worked with scores may have refined skills of anticipating music within the particular pieces that have become familiar to them through refined playing and listening. I will return to this issue in Chapter 8 when discussing the results of the practitioner-research project.

### **3.4.2 Pitch location: sound regulation through symbols**

Besides 'inner hearing' in its broadest sense, I described (2.2.1) how a traditionally central task in aural-skills education is to guide the students in developing *pitch location-skills*: to connect their implicit awareness of pitch relationships with symbols such as solmisation or pitch nomenclature, staff positions or instrument positions – any system which locates the pitches relative to each other. The vivid pedagogical discussion around the topic has tended to emphasise differences between various aural-skills methods, such as the choice between various solmisation systems. (See 2.2.1 for references.) From the action-oriented perspective, however, the process of teaching pitch-location skills has some important shared components even in very different aural-skills methods. It is possible, namely, to explain pitch location, too, through the previously discussed principles of cross-domain mapping and anticipated sound regulation. Roughly stated, pitch-location skills can be understood as skills of regulating sound through symbols, which also locate the pitches in one way or another.

Whatever the specific method, traditional aural-skills pedagogy that primarily relies on listening, singing and writing typically starts the pitch-location process with some music or pitch patterns that the students know by ear. Teachers either teach their students some songs by ear, ask them to recall familiar melodies, or teach them scales or specific melodic patterns. Students are then guided to pay attention to pitch

relationships in the patterns that they sing and hear, and the pitches are labelled according to the methods in use.<sup>53</sup> At this stage, the students are typically able to use the pitch nomenclature for the particular melodic patterns which have been learned. They can use solmisation syllables or other pitch nomenclature for the specifically learned melodies or scales, but not for previously unknown melodies. The next and often long process is to help the students to de-contextualise and re-contextualise the pitches: abstract them from the specific melodic context, combine them in varying orders, and even in these new patterns to anticipate how notated pitches will sound or how heard pitches will be notated. Typical activities include the singing back of melodic motives in sol-fa or letter names, the composition of the students' own motives using sol-fa syllables or other nomenclature, or the writing of short dictations with quick feedback. In sight-singing, too, the pitches are combined in varying orders, and the students will get quick feedback. All these activities, which are common in elementary aural-skills education, give the students the experience that they are *regulating* musical sound by the pitch symbols. The students can choose various paths and anticipate and hear their musical result, as if the symbols were an instrument that they could play. Gradually, they can learn to internalise the connection between anticipation and feedback so that audible sound or overt action is no longer needed.<sup>54</sup>

When people find music by ear on an instrument, they in fact engage in a process that has many similarities with traditional aural-skills methods. Especially on the keyboard, on which each key corresponds to a specific pitch, a musician who has a tune in mind can find it by trial and error, and gradually learn to anticipate how a

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<sup>53</sup>To clarify the role of movement and spatiality, I draw here on examples from elementary aural-skills pedagogy. Similar basic elements continue to be involved in many methods that are used among adults and more advanced students, but the role of spatial action is no longer as visible in later stages. In the beginning, the rote teaching of songs is typical for Curwen's tonic sol-fa (Rainbow 2007b) and the Kodály tradition, which draws on Curwen's work (e.g. Adam 1971; Houlahan & Tacka 2008), the teaching of scale-based patterns to the Galin-Paris-Chev  method (Bullen 1878).

<sup>54</sup>Davidson, Scripp and Meyaard (1988, 18–20) have interpreted the students' ability to abstract symbols from their original musical context and to re-contextualise them as a transition process from *figurational* to *operative* knowledge, referring to the concepts of Jean Piaget. One source they also cite is Jeanne Bamberger's (1991) single-case study of the decontextualisation–recontextualisation process of musical pitch in one child's learning.

chosen path on the keyboard will sound. In the stage when the musician still needs audible feedback, the connection between action and feedback is even more direct and causal than in typical vocally oriented, formal aural-skills methods, which require the teacher's feedback. By changing the path on the instrument, the player can directly regulate sound. Even without absolute pitch, many pianists have learned to hear pitches 'as' certain keys of the keyboard even when they are not playing concretely. In this research, I will refer to this particular type of cross-domain mapping as *keyboard projection*: the pianist has learned to categorise pitch by projecting it onto the keyboard. In reverse, the musician is projecting qualities and categories onto heard pitches, even though these qualities and categories are actually derived from the sound-production actions.<sup>55</sup>

Whether studying through the vocally oriented aural-skills methods or finding tunes by ear, a successful learning process means that students know a set of sol-fa syllables, letter names, or a scale on a staff, so that each position in the system 'means' a certain pitch in a pitch system. Such an awareness may appear to be static – students just seem to feel how a 'fa', or fourth scale degree, sounds. Both pedagogical and the previously reviewed action-oriented literature suggest, however, how a prerequisite of such an awareness is the experience of having moved around in the system and received aural feedback (e.g. Houlihan & Tacka 2008, 146–150). It is therefore possible to see the skill as being based on the ability to control sound through action: to anticipate responses to movement in a concrete or symbolic pitch system.

By coining the term *pitch location*, I have ignored here many differences between aural-skills methods that have gained lots of attention in pedagogical discussions, such as the relative merits of relative versus absolute nomenclature, or the merits of increasing the pitch material scale-wise or based on ideas of tonal hierarchies. My purpose here is to draw attention to the elements of anticipation, feedback, and cross-

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<sup>55</sup>To my knowledge, musicians' projection of pitch to their instrument has not been a topic of academic research. References to this skill mostly appear in pedagogical texts, or articles with their main focus on another topic, e.g. Cook (1990, 99–100); Butler (1997, 46) and Covington (2005, 36).

domain mapping, which I see as belonging to very diverse methods, and which I see as often ignored when attention has concentrated on issues of nomenclature and on the ordering of materials. It needs to be noted, however, how traditional aural-skills methods and playing by ear differ in the degree of active mental anticipation that is needed. When learning pitch location through the traditional formal methods, students are typically guided to retain and activate some reference patterns in their minds from the very beginning. Depending on the method, they will learn how a scale sounds, or learn with sol-fa syllables some simple melodies that they can use as references for certain pitch relationships. Pitch material is then typically increased gradually. When playing by ear, on the contrary, students can basically progress further longer by relying on the audible feedback provided by the instrument. Successful learning through these various paths, therefore, seems to involve different constraints on how the increase of material and the internalisation process relate to each other.<sup>56</sup>

While my focus here is on pianists, the role of sound production through spatially arranged symbols can be illustrated by some comparisons. While the keyboard offers single unequivocal place for each available pitch class, in the other extreme the human voice does not project pitch relationships to any system that the singer could observe outside of one's own body. Even a French horn offers very little external coordinates for pitch. With such instruments, the musicians hardly get help from imaginary finger movements in dictation situations in the same way as a pianist, or even a trumpeter. Different examples of situations in which musicians do not necessarily establish a clear connection between movement in a pitch system and aural feedback are the situation in which they listen to music with a score or play music from a score. The musician can see and hear the connection between symbols and sound, but needs not necessarily orientate in space on the basis of aural pitch discrimination.

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<sup>56</sup>Notation softwares, in fact, seem to provide one more possibility for learning, which also involves the same basic components: it is possible to notate music on a staff and hear the resulting pitch patterns.

### **3.4.3 Patterning influenced by production: vocally oriented learning versus patterning through the keyboard**

I dwelt on ‘inner hearing’ and pitch location at some length, because the action-oriented interpretation of them implies that they are more contextual than what often seems to be recognised. Because people draw on their production-based habits to control their aural anticipation of music and to conceive music as consisting of discrete and organised pitches, there is no neutral or objective ‘inner hearing’ or pitch location. Implications of this view become clearer when adding *musical patterning* to the previous sub-skills. In practice, musical patterning is tightly connected to ‘inner hearing’ and pitch location, since imagining music in one’s mind or conceptualising its pitch also require that the actor manages to grasp music in meaningful patterns.

I described in 2.2.1 how the grasp of music in meaningful patterns is supported and developed in aural-skills pedagogy, but often more as an implicit than a consciously attended pedagogical component. Many traditional, vocally oriented aural-skills methods develop the students’ grasp of meaningful patterns in music in a very logical way, within their own singing and notation oriented approach to music. The students sing in parts, label vertical sonorities such as chords and intervals and practise harmonic and contrapuntal patterns with solmisation. Together, the activities and chosen symbols help the students to combine their inner-hearing and pitch-location skills with a growing experience of various harmonic and contrapuntal situations. Recent cognitively oriented books and articles have devoted more conscious attention to patterning and have guided teachers to organise their students’ listening tasks through conscious analytical questions, such as those concerning cadences or metric patterns (section 2.2.1). In any case, it is possible to say that even very recent aural-skills materials have continued a tradition which emphasises singing and writing and supports musical patterning through vocal activities, notation and explicit analytical knowledge. I will refer to this traditional mainstream of aural-skills education in the following as *the vocal-analytical* approach.

However logical tools the vocal-analytical aural-skills pedagogy might have given for students’ patterning of music, it has mostly designed courses and materials as if formal aural-skills education were a closed system, without addressing the students’ previous habits of patterning music on the basis of their broader engagement

in music. I see this neglect of the students' broader experience as rather problematic, especially with the students who play such an instrument as the piano – which provides a very different viewpoint to music from singing and many traditional aural-skills tasks. From the perspective I have suggested here, namely, people perpetually learn to grasp patterns in music as they interact with it. While they are logical on their own terms, formal aural-skills methods nevertheless appear somewhat weak in meeting the students' previous knowledge or supporting their broader musicianship if those methods do not recognise how the students have previously learned to pattern music.

I started the practitioner-research project, which I will explain in the following chapters, assuming that there is a potential disconnection between the types of patterning that are supported in traditional vocal-analytical aural-skills education and many advanced pianists previous knowledge and broader engagement in music. I had therefore sought ways to support the students' meaningful patterning of music based on keyboard activities in which they would play by ear, figure and transpose various harmonic units. As a background for the practitioner-research project, I will briefly outline some characteristics of pianists' patterning of music, which I see as quite obviously worth taking into account when studying their aural-skills learning.

As I suggested in the two previous sections, musicians already engage in a basic and very effective way of 'aural analysis in action' as they listen to music and find out how to produce it – when they learn music by ear. Learning music on a keyboard in this way, however, is quite different from the corresponding process in singing or melodic instruments. On one hand, the keyboard even allows musicians to learn by ear harmonic and polyphonic patterns in a very practical way, through aural imitation, trial and error. On the other hand, any fluency in such learning requires that the pianist needs to know patterns that are convenient for the keyboard, and also for the aural acquisition of music. Pianists can of course play by ear or improvise on their own and thereby gradually learn to grasp the keyboard as meaningful musical units through first-hand experience – as demonstrated by the existence of many self-taught pianists. In musical traditions in which performers commonly learn lots of music at least

partially by ear, however, it also tends to be the norm that keyboardists deliberately practise various types of idiomatic patterns, which then help them to learn music by ear in meaningful units. Jazz musicians practise chord progressions and elaborate ‘jazz standards’, continuo players learn typical harmonic progressions and voice-leading solutions, and even classical piano tradition used to involve ‘passage work’ as an essential part (Gellrich & Sundin 1993; Gellrich & Parncutt 1998; McPherson & Gabrielsson 2002; see also section 2.1.2).

In a technical sense, the musician’s command of keyboard patterns can be seen as bridging some of the characteristic disparities between how music appears on the keyboard, and how it is easiest to grasp through listening. It is very natural for people to learn music by ear in ‘middle level units’: motives and musical gestures rather than single tones – just as words and sentences are more convenient for linguistic messages than phonemes. By hearing, furthermore, the same music can be easily sung or imagined in different transpositions, whereas on the keyboard each transposition requires the pianist to practise somewhat different movement patterns. Aside from these practical considerations, skilful pianists’ keyboard patterns also incorporate knowledge of musical styles and idioms. Indeed, pianists who practise idiomatic keyboard patterns can be said to be building mental tools in the Vygotskian sense. They develop patterns of action that have a cultural and concrete origin, but which also facilitate the musician’s individual thinking.

In musical traditions in which learning by ear is common, such as jazz, popular and some early music, playing by ear is frequently used in connection to elements of improvisation. This means that musicians may also plan and receive musical feedback in a somewhat imprecise way, for example anticipate the harmonic outline of phrases, but not necessarily each single pitch to be played in a detailed way. If the pianist is using aural models and learning music from a recording or live performances, the aim is not always a detailed reproduction of the aural model. The aural analysis, rather, supports judgements on what kinds of musical solutions will fit a given situation. Improvising musicians have also been found to alternate between the imitation of aural models and the freer exploration of patterns on their instrument – which also involves



the creative use of mistakes (Kenny & Gellrich 2002, 120). When finding desirable patterns in their experiments, they may adopt them to their vocabulary. Existing music and first-hand exploration, at best, may work as mutually complementary sources of patterns and ideas.

The interaction of aural analysis and the pianists' vocabulary of keyboard patterns is further elicited by the use of such shorthand notations as chord symbols or figured bass, which seldom provide a description of the specific, registrally defined pitches to be played. Such notations require the player to interpret chords as flexible units, which can take various textural shapes, and can be elaborated with added or changed pitches. The fact that many shorthand notations are incomplete or insecure requires a flexible type of reading, in which the musician reads the musical context rather than single symbols, and combines the reading with knowledge of idiomatic and stylistically appropriate harmonic or voice-leading patterns (e.g. Christensen 2002, 7). Additionally, the shorthand notations are often used as a rough starting point and are combined with recorded and other aural models to find solutions to texture and voice-leading. Musicians may even modify some harmonic patterns in case of very rough or unreliable notations.

In all, I consider that the movement patterns that mediate pianists' anticipation of musical sound, or their grasp of heard music, are such a central component of pianists' aural awareness that they deserve a recognised place in pianists' aural-skills pedagogy. Playing by ear offers many of the same benefits for pianists' aural awareness as those pursued in traditional aural-skills education – but it involves quite different processes of patterning. The difference from vocally oriented aural-skills education becomes even more radical when considering score-mediated learning – which is worth taking into account in pianists' aural-skills education even if only for the reason that it represents the most typical way of learning among classically oriented musicians. The repertory pianists learn with scores tends to be, on the average, more extensive in length and more complex in texture than the material involved in the contexts and situation wherein musicians most often learn by ear, which further intensifies the necessity of keyboard patterns. When working with

scores, naturally, pianists can build their keyboard patterns very differently from what happens if they play by ear: by grasping the patterns visually in the score and learning how the visually anticipated patterns connect to movements on the keyboard. Still, it is possible to say regarding this mode of learning, just as with pianists' learning by ear, that it involves keyboard patterns in such a central way that possible interaction with vocally oriented aural-skills education needs at least special consideration.

I will not go into further comparisons between aural-skills pedagogy and score-mediated piano study here. Quite obviously, the idea that aural-skills learning develops students' ability to anticipate how notated music would sound becomes quite complex in the case of piano textures – a topic which I will continue when analysing my findings from the practitioner-research project (Chapters 7 and 8). Here, it is sufficient to say that I built my practitioner-research design on the assumption that score-mediated learning of music is a central part of my participants' musical experience, and needs special attention – which led me to involve the students' piano repertory in the courses.

#### **3.4.4 Conscious analytical organisation: some remarks**

For the fourth sub-skill that is typically attended to in aural-skills pedagogy, I formulated the conscious *analytical organisation* of music. Particularly when the aim is to develop the students' ability to consciously analyse and describe music, the analytical ideas which teachers can use are broad and diverse – a rich topic that I, however, will not venture into further here. Since my main interest is to discuss how aural-skills education related to performing students' and especially pianists' work and previous knowledge, I limit my discussion to some general remarks on the relationship between musicians' production-based awareness of music, and their skill in conscious analytical description.

As already noted (section 3.3), a basic tenet of action-oriented approach is that people's ability to act intelligently and sensitively is not dependent on their ability to describe the actions or the materials involved in their actions. They can, of course, stop to reflect on their actions and materials, which means that they enter a different

process of meaning-making from the previously described productional mechanisms. Instead of relating themselves to music through production, people approach it through description. I refer to these two possibilities in this dissertation as *production-based meanings* and *description-based meanings*. The descriptive uses of symbols can draw on productional habits, but cannot be expected to replace them if the goal is to develop the students' thinking *in* music and not only thinking *about* music – to use a distinction pointed out by many authors (Karpinski 2000, 4).

While intelligent and sensitive music production does not – from the action-oriented view – necessarily require the ability to consciously describe the structures, the two types of meaning-making can naturally benefit each other in many ways. Klonoski (2000) has observed, however, that the methods and materials employed in aural-skills education often assume a too simple correspondence between typical concepts introduced in music-theory courses and students' perceptual development. As he points out, musical perception and imagery develop differently from the labelling and analysis of musical structures, which are typically practised in basic music-theory courses. This relationship between students' perceptual skills – or production-based skills – and the analytical description of music turned out to be quite complex in my practitioner research, and I will return to it when analysing my findings (section 6.2). At the very least, the interaction between productional and descriptive awareness of music is a far more complex issue than what is often implied by pedagogical literature, which simply assumes that practice in analytical discussion will immediately benefit musicians' practical activities.

### **3.5 Aural-skills education and pianists' aural awareness: key issues**

In this chapter, I first explained general principles of an action-oriented concept of human learning (3.1–3.2), and then reviewed its general applications in music (3.3). Finally, I applied the action-oriented approach to specific issues concerning the relationship between typical processes in formal aural-skills education, and pianists' typical habits of action (3.4). I sought to formulate some typical sub-skills and processes of aural-skills learning in somewhat more general terms than conventionally applied in pedagogical literature on aural-skills education, with the intention of

drawing comparisons between formal aural-skills education and pianists' development of their aural awareness through their broader engagement in music.

To summarise, formal aural-skills education has in my view typically employed learning-processes in which students learn to regulate musical sound through bodily action – singing – and then learn to regulate sound mentally without overt action. This process leads to skills conventionally called 'inner hearing'. Students also learn to regulate sound in a way connected to notation, solmisation names, or other pitch nomenclature, and thereby learn *pitch location*: the ability to connect experienced pitches with symbols, which locate them in tonality or relative to each other. Successful learning also required that students learn to grasp in music *patterns* that are meaningful and appropriate to the task at hand – which teachers can support both through concrete action and conscious analytical organisation. When students consciously analyse and organise their musical experiences, however, this means a different approach to notation and other symbols from the concrete productional ones. Notation or other symbols no longer evoke musical sound through continuous action, but become conscious topics of reflection, which in turn often require interrupting the practical activity.

Pianists may also go through very similar learning processes with their instrument. They can learn to regulate sound through playing the keyboard, which also displays the pitch dimensions as clear categories. It therefore appears very understandable that pianists sometimes seem to develop on their instrument very similar skills of inner hearing and pitch location as those conventional studies in formal aural-skills education. If they learn to orientate on the keyboard by ear, the keyboard becomes for them a system of symbols for pitch relationships. Such parallels, however, are easiest to draw when dealing with concise and texturally simple music examples – for example, the playing of simple songs on the keyboard. As soon as pianists play music that has several parts or even just melody and harmony, and is texturally complex, their learning processes seem to depart from the approaches that have been typical in formal aural-skills education. Already playing by ear on the keyboard requires that pianists know idiomatic keyboard patterns that differ from

those they are convenient to grasp vocally, and differences still become wider if considering pianists' score-mediated learning of music.

In general, I am of the view that the effective and musically meaningful patterning of music is quite obviously a topic that needs attention if one desires to develop aural-skills education that really supports pianists' work and interacts with their pianistic knowledge. While there is nothing wrong in aural skills education also offering something that is not familiar to pianists, there is clearly a need to specify how the contrasting approaches then relate to the students' previous knowledge and how they can support its development.

Another topic I also regard as deserving attentions on the basis of my comparison between action-oriented theory, traditional aural-skills pedagogy and pianists' typical activities, is the active and constructive nature of human perception and imagery. As I have described, action-oriented theories maintain that people's perception and imagery are highly dynamic and active processes. Even when people themselves might feel that they are forming 'images' of their environment, perceptual details are not statically present in perceptions and images, but the actor needs to collect them in a constantly active process (Noë 2004; see 3.1.4). People also develop dynamic patterns of anticipation, which can allow them to anticipate events or patterns somewhat generally, or in ways that allow various possible solutions. Against this view, the way in which aural-skills pedagogy has discussed students' 'inner hearing', or their ability to imagine how notated music would sound, has tended to have a very static and passive tone. Very often it is implied that skilful musicianship involves the ability to imagine music as 'correctly' or 'completely' as possible. Correctness or completeness, however, do not appear as the only ideals in the light of action-oriented theory – or not even possible ones. Rather, action-oriented literature would suggest that the ability to anticipate possible musical solutions and continuations is often as important in skilful musicianship as precision or attention to detail.

In the next chapters, I will proceed to describe a practitioner-research project, which I designed so as to apply some of the principles discussed in this chapter. A

central idea was that pianists can employ in their aural-skills learning the possibility to explore harmonic structures on their instrument in a practical way. I developed this theoretical part in interaction with the practitioner research project, and included topics that I then found relevant for understanding the evolving research findings. In particular, I will return to issues of pattering, to the dynamic nature of anticipation, and to the complex relationships between production and description when analysing the findings from my practitioner research.

## SUMMARY

From the *action-oriented* cognitive perspective, people learn by interacting with their learning environment, by participating in the shared use of cultural tools and symbols and by drawing on the tacit knowledge of their community. Other central tenets are the inseparable nature of human body and mind, along with the view that bodily action also forms the basis of abstract and symbolic thought. This perspective has been influential in music education research, ethnomusicology and some branches of music theory, but rarely influenced the research and pedagogy of aural skills.

The typical sub-skills emphasised in aural-skills pedagogy can be conceived from the action-oriented perspective as being based on habits of music production. Musicians learn ‘inner hearing’, pitch location and musical patterning by producing musical sound first directly and by gradually internalising the connection between action and musical feedback, so as to gain increasing mental control over their musical experiences. This view is applicable to both formal aural-skills education and the learning processes whereby musicians develop their aural awareness informally or through their instrument. It also helps to identify conflicts and disconnections between formal aural-skills education and students’ broader engagement in music. In my view, the contrast between vocally oriented aural-skills pedagogy and pianists’ typical habits of musical patterning is a potential source of conflicts, which I decided to address in my practitioner-research project.



## **PART II: THE PRACTITIONER-RESEARCH PROJECT**





## 4 The practitioner-research project: methodological principles and research design

This research includes a practitioner-research project, in which I combined the roles of a teacher and researcher and organised two aural-skills courses for pianists at the Sibelius Academy, Finland. Each course spanned one academic year (September–May), with different participants in the two successive years (1998–1999 and 1999–2000). The two groups included seventeen participants in all, but I limited the research to twelve participants, who had the piano or harpsichord as their major instrument and who participated at least for one full semester. These participants were music-education or performance majors. The data sources were the twelve students' learning journals and interviews and my teacher's journal and notes, as well as tape recordings of lessons and documents of the students' coursework.

In this chapter, I will describe the design of my practitioner research and my means of gathering data. In the next one (5), I will describe the approaches and techniques that I used for the analysis of the data.

### 4.1 The choice of practitioner research

I conducted a practitioner-research project in my familiar working context at the Sibelius Academy, Finland, on an aural-skills course that is part of the regular curriculum.<sup>57</sup> As I described in the Introduction (1.1), my research interest was rooted in the discrepancy I had felt between my view of aural skills as a subject that would enrich the students' personal musicianship, and the less than enriching learning experiences that I had often found in aural-skills classrooms. It also appeared to me that students often learned similar skills through their practical music making, especially through playing by ear. I also saw that instead of the typical complaints

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<sup>57</sup>I conceive *practitioner research* here as a sub-branch of *action research*. While action research is a general term for projects that combine research with practical development, practitioner research is used specifically for research into one's own practice. Action-research and practitioner-research projects, in turn, typically employ a *case study* format and therefore can also be conceived as sub-branches of case studies. The use of these terms differs among authors, e.g. Cochran-Smith and Lytle (2009, 40–41) see action research as a sub-branch of practitioner research.

regarding students' inadequate previous skills, aural-skills educators could direct more attention to the recognition and employment of their students' existing skills.

I decided that my topic would be most appropriately studied by working with particular students over several months, and by involving them as active participants in the research, and gathering diverse types of data – a project that was possible by taking the role of a teacher-researcher. Being a pianist myself, I focused the study on students with the piano as their major instrument, but I also expected to promote my analytical understanding of aural-skills learning in a way that could later support the education of other instrumentalists. It is useful to note, therefore, that I focus this research on the piano as the students' major instrument – which is a different topic from the use of the piano to support students' learning of aural skills or music theory, regardless of instrument, which has been a more common viewpoint in previous aural-skills education in case keyboard work has been involved (section 2.1.2).

My impetus for the research project was typical for practitioner research: a controversy between educational values – here, encouraging the students' personal development and the richness of their musical experience – and what I saw happening in my educational practice (e.g. Elliott 1991, 107; McNiff, Lomax & Whitehead 1996, 38). The direction in which I sought to develop my work could also be characterised as typical for teacher researchers: a pursuit of educational practice in which a research-like attitude and critical questioning are embedded in a natural way (Cochran-Smith & Lytle 2009, 44–45). The project also meant that through working interactively in my own context and analysing my data, I clarified my understanding of aural skills relative to previous pedagogical and research-based knowledge.<sup>58</sup> The contents of Chapters 2 and 3 of this dissertation, therefore, developed on an interactive basis with my practitioner-research project.

The complementary relationship between the theoretical part of this research and my analysis of my own practice was reinforced by the fact that I gathered the data rather early in my teaching career, and since then divided my time for several years between research and teaching. The process enabled me to view my work and the

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<sup>58</sup>On the integration of various types of knowledge in professional practice (e.g. propositional, personal and process knowledge) through practitioner-research projects, see e.g. Fox, Martin & Green (2007, 25–28, 59–65.)

gathered data against a growing awareness of pedagogical tradition as well as educational research, and also to take distance from some conventions of thought that I found recurrent in previous literature and pedagogy. In particular, I saw the need to raise critical discussion on the assumption that students' aural awareness could be educated in isolation from their relevant contexts of musical action and from their instruments, and that their perception of music should be practised disconnected from music production. I will describe in Chapter 5 in more detail how my analysis of the data and the theoretical part of this dissertation interacted, and devote the present one to the practical research design.

## **4.2 The aural-skills courses**

I invited the research participants by announcing a call for volunteer students to participate in a group in which they would study an aural-skills course as part of their programme, while also participating in a research project. I published the invitation in the internal newsletter of the Sibelius Academy, and addressed the group to students who had the piano as their major instrument. I announced that we would seek connections between aural-skills studies and the students' piano playing, study the students' instrumental repertory, and incorporate 'free piano' activities in the course (Appendix C/Course announcement). I asked the students to keep learning journals and to participate in interviews, and incorporated various types of keyboard work into the course. I also tape-recorded the lessons and asked the students for permission to take copies of their classroom notes. I used a similar research design in the two successive years 1998–99 and 1999–2000.

In several respects, the two courses followed the conventions of aural-skills education at the Sibelius Academy. We basically followed the normal curriculum and course requirements, and the students had gone through the regular placement tests when entering the Sibelius Academy.<sup>59</sup> The keyboard work, learning journals and

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<sup>59</sup>As noted in 3.3, the Deweyan term *curriculum* refers to a comprehensive plan of how to support the students' development in their field of study, although the word is also used in academic contexts in a more limited sense for the contents of courses and degrees. With the term *course requirements*, I refer to the specific skills and tasks that the students need to complete to pass a course. At the Sibelius Academy, the course descriptions that are published in study guides describe the goals, central

interviews, however, departed from the conventional design of aural-skills courses, and also from my own previous aural-skills teaching. My aim when introducing these new means was to involve and become acquainted with the students in a broader way than was my experience from previous aural-skills teaching, and to create a learning environment that would increasingly employ and activate the students' previous knowledge and future interests as pianists and musicians.

Both of the two courses spanned one academic year. The groups met for one weekly lesson of 90 minutes over a total of 30 meetings spanning from September to the beginning of May. I conducted the lessons in a 'piano laboratory' equipped with electric keyboards and headphones. Below, I will explain this research design in more detail.

#### **4.2.1 The aural-skills courses in their institutional context**

I chose for my research the so-called 'Aural skills C': the first of two aural-skills courses that was a part of the curriculum for most students at the Sibelius Academy, Finland.<sup>60</sup> The course concentrates on common-practice tonal music and involves a short introduction to modal music. Thereafter, the students were expected to progress to a course 'aural skills B', which also included post-tonal music, as well as more advanced work with polyphony and rhythm. All the courses were guided by a course description, which specified the requirements to be met by the end of the course. After the C level, the students were expected to sight-sing tonal melodies from diatonic to chromatic, to write down similar melodies as dictations, to recognise chords from common-practice tonal music with the most common chromatic alterations, and to

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activities and requirements of each course. The course description for 'Aural skills C' is provided in Appendix D.

<sup>60</sup>The Sibelius Academy adopted the Bologna standard of bachelor's and master's degrees in 2005, which brought some changes to aural-skills studies relative to the time of my data-gathering. The students now need to study their basic aural-skills courses during their bachelor's degree, and cannot postpone them until their later master's years as some of the participants had done. Students can also have some freedom to decide which aural-skills and theory courses they study, within a prescribed number of credit points (Appendix B/Music education and music performance programmes). In practice, the majority of students still include in their studies a minimum of two aural-skills courses, each spanning one academic year, as during my data-gathering.

read rhythmic patterns in stable metres and to write them down as dictations. (Appendix D/Aural skills C: course description.)

Even if I was somewhat critical about many standard tasks and requirements that have become customary in aural-skills education, I believed it worthwhile to retain the traditional requirements of the ‘Aural skills C’ course. I considered the content rather typical for what is taught to beginning professional students or advanced amateur musicians worldwide, and yet in an international regard quite modern and musically contextual, especially regarding the emphasis on authentic music examples. The traditional requirements, as I had found them, were potentially useful for the students if they only managed to find suitable ways to learn and connect the study to their instrumentalist musicianship.

Because aural skills and basics of music theory and history are also part of the curricula of music schools for children and young people (Appendix A/Aural-skills education in Finland), the contents and requirements of ‘Aural skills C’ was set assuming that students had as children and teenagers completed at least four years of courses in aural skills and music theory. In practice, teachers and students often needed to manage various starting levels in the groups, which was also the case in the present project. If the students had studied the corresponding level elsewhere, they could also take a placement test and if successful, directly proceed to ‘Aural skills B’. Simultaneously to ‘Aural skills C’, the students normally participated in courses of music theory, which involved harmonic analysis, written harmony and voice leading (Appendix B/Music education and music performance programmes).

The research process also made me aware of the role of many institutional conventions, which I had not specifically designed in my research. In particular, the students made reference to the aural-skills tests that had formed part of the admission process to the Sibelius Academy, involving dictation, harmonic recognition and sight-singing. While the tests had a relatively small contribution to the admission, many students’ references to the tests in the interviews suggested to me that they contributed to the students’ conception aural-skills education and the expectations that would be set for them in the courses.

## 4.2.2 The participants

This dissertation is based on twelve students' data, gathered from two successive aural-skills courses. Table 1 displays some background information about the students in the two years.

<b>1998–1999</b>			
Age	Degree programme	Year / Phase	Previous aural-skills course
24	performance	master	music-institute level
26	performance	master	music-institute level
20	music education	1st year	music-institute level
33	music education	master	music-institute level
<b>1999–2000</b>			
Age	Degree programme	Year / Phase	Previous aural-skills course**
19	music education	1st year	music-institute level (+ aural skills C)
19	performance	1st year	aural skills C
20	performance	1st year	music-institute level (+ aural skills C)
20	music education	1st year	music-institute level
20	music education	3rd year	music-school level
21	music education	1st year	music-institute level (+ aural skills C)
23	music education	master	music-institute level
26	music education	3rd year	music-school level

*Table 1: The research participants*

*I classified the students in their fourth year or above as ‘master’ students. ‘Music-institute level’ corresponded to the recommended previous studies for the ‘Aural skills C’ course (Appendix A/Aural-skills education in Finland). A course in parentheses means that the students had previously studied the course but had not passed it in the placement test at the Sibelius Academy.*

Whereas the groups at the Sibelius Academy normally involved students with mixed instruments, I assigned the invitation to those students who had the piano as their

major instrument, regardless of degree programme. I considered the students to be suitable participants to explore connections between pianistic work and aural-skills learning, if the instrument was a central part of their musical background and was also central for their prospective work as musicians.

Counting the two years together, 21 students volunteered for the aural-skills courses. I chose 16 to participate and included 12 in the final data set. The first-year group suffered from some student drop-outs, and I also accepted in the first-year group two music-education majors with major instruments other than the piano. Additionally, I allowed two music education majors to join the first-year group for the spring term in place of the dropped-out students.<sup>61</sup> I only included in the final research data, however, those 12 students who had a keyboard instrument as their major instrument (11 piano, one recently shifted to the harpsichord), and who participated in a minimum of one full semester. Due to the 8 available places in the ‘piano laboratory’, my group size was slightly smaller than the normal groups of 10–12 students.

I consider the 12 participants quite appropriate for the research task. Everyone played a keyboard instrument, but the different students had very varying backgrounds regarding such activities as playing by ear or playing from scores, improvisation and singing. They also had different professional needs and interests. The inclusion of different study programmes was initially due to the practical reason of ensuring an adequate number of volunteers, but turned out to be very fruitful for the research. I had participants from performing and music education programmes, who provided a very valuable range of examples of how the piano, or keyboard instrument, could be a part of a student’s musicianship. There were also several students with previous problems concerning formal aural-skills education, and those who had postponed their aural-skills studies. I found them valuable critical cases: while being advanced and successful pianists, they seemed to have been unable to use

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<sup>61</sup>The reasons for the student drop-outs did not appear to be specifically connected to aural-skills learning. One student had medical reasons, and the others interrupted all their studies at the Sibelius Academy either permanently or temporarily.



their strengths in formal aural-skills education, or to benefit from it very much. Several participants were much older than the students who would normally participate in aural-skills courses; two participants had entered higher education in music having already earned a degree in another field. The students' previous studies in aural skills ranged from the basic level in music schools to those who had already studied courses corresponding to the 'Aural skills C' elsewhere. One student joined the course even though she had also passed the level test, willing to strengthen her skills, which she had found as yet not optimally connected with her pianistic work.

When applying to the Sibelius Academy, the performing majors were mainly accepted on the basis of their instrumental skills. The music educators' selection process involved a range of tasks, many of which can be also seen as related to aural skills: keyboard harmonisation and playing by ear and part-singing. (Appendix B/ Music education and music performance programmes.) From an international perspective, it also needs to be noted that the music education majors' studies were quite broad and intensive, covering several instruments, both classical and popular genres, and several years of keyboard harmony (see Appendix B).<sup>62</sup>

### **4.2.3 The lessons and activities**

The students' work during the course involved a weekly lesson of 90 minutes and homework. The piano laboratory in which we worked included eight electric keyboards with headphones, a CD player and a whiteboard. The students sat at the keyboards and used them in about half of the activities. For some activities, I asked them to close the keyboards altogether, and in some of them, to switch the sound off or play silently above the keyboard. In addition to the group lessons, the students performed aural-skills tasks or occasionally showed their prepared work to me

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<sup>62</sup>Music educators' professional needs and their implications for the theoretical subjects of music in the degree programme of music education, have been a topic of discussion and curriculum development during the years between the courses and the finishing of this dissertation. Nowadays, music education students normally have separate groups for music theory and aural skills, and the music repertory involves both classical and popular genres.

individually: in connection to the beginning and middle interviews and in one individual meeting before the final exam.

I will present in the appendixes a summary of the lessons of the second practitioner-research course in 1999–2000 (Appendix I) and a detailed description of the various activities that we used in the courses (Appendix K). When designing the course activities, I combined traditional elements of aural-skills pedagogy with keyboard work, which I viewed as usefully complementing or preparing the more traditional exercises. In particular, I designed the keyboard activities so that they would support the students' learning in the aural analysis of tonal harmony – a traditionally central area of the course, which many students found demanding. We devoted quite a lot of time in the lessons to working on recorded musical excerpts, which were used for aural transcription and aural harmonic analysis as well as for imitation, figuration and transposition on the keyboard. Our regular method of work was to extract harmonic units from the music examples, such as cadential patterns or small musical units of 8-16 bars, to elaborate them through transposition, figuration, and playing and singing of outer voices, and to apply this knowledge to new examples. I will refer to such work, which admitted lots of variation, as the 'extraction–elaboration–application' tasks, which were usually connected to one main music example that gained most attention at each lesson, or sometimes two examples. Through the such work, I pursued a tight combination of the students' analysis of music examples, and their first-hand exploration of material.

I usually prepared the more extensive tasks with 'warm-ups' – singing and playing exercises that did not require extensive time to learn and that aimed at making the students comfortable with the materials and structures under study. I also used examples of piano repertory in the courses so that the students could sing and play outer voices or recognise, play, embellish and transpose chords and harmonic progressions. Besides these activities, the students practised traditional sight singing, rhythm reading and rhythm dictation.

In all, the work at the lessons consisted of the following musical activities:

a) Regularly used activities

- Warm-ups and technical exercises: singing and playing chords and scales

- Main music example: ‘extraction–elaboration–application’ tasks
- Sight singing
- Rhythm reading
- Transcription and imitation homework

b) Occasionally used activities

- Analysis of music with scores
- Polyrhythmic keyboard exercises
- Playing by ear and harmonisation of melodies on the keyboard

As I clarify in Appendix K (Lesson activities), the lessons involved a set of regularly used musical activities, in which I pursued systematic practice that would enable the students to develop their study skills and to make clear progress. In addition, there were activities that I occasionally incorporated into the lessons to suggest further musical connections with the structures we had studied, and to give ideas on further work methods. Besides paving the students’ way to dictations and other standard tasks, my goal with the keyboard work was also to demonstrate how the piano could be used in a multiplicity of activities that would engage the musician’s listening and analytical awareness of music. I also sought to offer the students a variety of activities and to encourage them to find those that were suitable for their needs.

Transcription and imitation tasks and sight singing belonged both to the lessons and to the students’ homework. I listed the transcription and imitation homework above as a separate item, however, because the independent solving of these tasks required some special effort and practice from the students, and because the transcriptions during lessons were rarely separate tasks, but belonged to a larger sequence of activities.

In the musical materials, we started from diatonic melody and harmony involving basic tonal functions, and progressed to increasingly complex diatonic and gradually chromatic melody and harmony. We also worked on a concise selection of modal music. In those homework assignments where I asked the students to use their own repertory, I mostly left them free to choose the style and materials.

Some sources behind my pedagogical approaches were vocally oriented aural-skills tradition, ideas presented in recent aural-skills literature associated with

constructivism (section 2.2.3), and ideas on keyboard work from other fields. Following traditional models of aural-skills education, I sought to develop the students' inner hearing, pitch location, harmonic and metric patterning, and the analytic organisation of music – sub-skills that I previously described as being central to aural-skills pedagogy (section 2.2.1). I also drew on many traditional singing activities that are typical in aural-skills pedagogy, such as vocal warm-ups, arpeggiation exercises and the singing and playing of musical lines against each other, but I adapted many of the activities in order to connect the students' singing and playing. For the keyboard exercises, in turn, I drew on my pedagogical studies and teaching experience concerning 'free piano' (section 2.2.5), as well as my own pianistic studies and experiences.<sup>63</sup> The course activities were mostly ones I had used in my previous classes, while the new element was combining them for an entire course, and moving the aural-skills lessons to the piano laboratory.

#### **4.2.4 The two years**

I basically used a similar course design for the two successive years. Unless otherwise specified, I will present my results in Chapters 5–9 by combining the data from the two years and I will formulate themes and issues by drawing on both of them. The most important change that I purposefully implemented in the second-year course was that I started to work with the students on the written transcription of music from the outset, whereas in the first year I had mostly relied on keyboard work at the beginning and only asked the students to write down melodic and harmonic excerpts after they had first played and transposed them on the keyboard. My intention with postponing the writing in the first year was to guide the students to project music that they heard onto their instrument and also to use this skill when writing music down. The students could indeed proceed to writing music down directly without the instrument, but the shift to notating appeared to be somewhat too quick to enable the students to develop their writing strategies. I discovered that many of the first-year students wrote music

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<sup>63</sup>Regarding specific pedagogical sources that I used when planning the course, I can mention the texts on aural-skills pedagogy by Brink (1980), Davidson & Scripp (1988) and Covington and Lord (1994), 'free piano' materials such as Palmqvist & Nilsson (1996) and my studies in the Zoltán Kodály pedagogical institute of music in Hungary in 1994–1995.

down in a somewhat unpractical way, often note to note, and failed to grasp larger units in music. Aside from my classroom experiences, the students' interviews after the course led me to the conclusion that we could devote more attention to the process of notating. I also decided in the second year to combine the written transcription of music with analytical discussion of the stylistic and expressive functions of harmony more often, a decision influenced by the first-year students' ideas on further improvement.

In terms of the scope of the whole research, the changes in my teaching between the first and second year were quite moderate, which means that I conceive the years as two parallel versions of a basically similar course, rather than as a continuum. When related to models for action research, they would therefore represent one *action cycle*.<sup>64</sup> From the viewpoint of my refined research task, namely, the two years still represented a common way of applying the action-oriented approach to practice, with very similar types of aural-skills tasks and a similar involvement of the students in the course. Nor can the second year be regarded as an unequivocally improved version of the first one. Rather, the continuation of the research for the second year enabled me to study with a larger group of participants and to formulate more clearly what I saw as critical issues for further development.

### **4.3 The design of data gathering**

The most important data sources in this research are the students' interviews, their learning journals and my journal and notes as a teacher. I also tape-recorded the lessons and individual meetings with the students, made written plans of lessons, and received after the course permission from the students to photocopy examples of their notebooks with music transcriptions.

As is frequent in practitioner research, I chose for the final data analysis a selection of the data originally gathered (e.g. McKernan 1996, 81–83) – focusing the research on the twelve students whom I introduced in 4.2.2. I chose their interviews and learning journals and my journal and notes to be the principal sources, and used

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<sup>64</sup>For more discussion of this research project relative to cyclic action-research models, see Chapter 5.

the tape recordings and documents of the students' coursework to develop and triangulate the evolving results.<sup>65</sup>

The students' interviews and learning journals already occupied a central place in my initial research plan. I wanted to learn about the students' perspectives regarding what was central for their meaningful learning, and also saw it as educationally important to encourage them to discuss and reflect upon those perspectives. While these interests retained their importance throughout the research process, I started to view the students' interview and journal data more and more as evidence of jointly constructed meanings – which were very much shaped by the particular context and by my participation as a teacher-researcher. Being interviewed by an aural-skills teacher or writing a learning journal to be shared with a teacher clearly led the students to certain types of discussion. Within the data, I noticed how different situations easily prompted different types of reasoning and justification. In particular, I found it illuminating to compare how the students talked differently when describing their pianistic work, and their experiences in aural skills classrooms.

As I learned to see the students' interviews and journals in an increasingly complex light, the research process also enabled me to return to my reflections as a teacher from a changed point of view. While I will describe such analytical processes in the next chapter (5), I will in the present one provide the basic information of the data gathering.

### **4.3.1 Interviews**

I met each student individually for an interview twice in the first year and three times in the second. Interviewing appeared to me a natural choice that would illuminate the students' perspective on aural-skills learning and also support the collaborative and dialogical relationship with the students, which I had decided to pursue (e.g.

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<sup>65</sup>The term *triangulation* is commonly used in qualitative research for the use of multiple data sources to illuminate the studied phenomenon from multiple perspectives (e.g. Somekh & Lewin 2005, 349). The term has also raised criticism, because some authors see it as being a limited metaphor for the complex interplay of perspectives that is typical for research (see e.g. Kincheloe & McLaren 2005, 319; Richardson & St. Pierre 2005, 963).

Altrichter et al. 2008, 126). I contacted each student after they had signed up for the course, and invited them for the initial interview. We met during the week that preceded the beginning of the course, in a classroom equipped with a piano, or with some students in the piano laboratory, where we were to have the regular lessons. I interviewed the students in a similar way at the end of the first year. Since I found that some of these discussions would have been useful had the course continued, I added a middle interview in the January of the second-year course (Appendix G/List of data).

The interviews were semi-structured. I had prepared an interview guide that included the themes we would cover with each interviewee and some suggested questions, but the exact formulation of the questions and the order of discussing them remained flexible (Kvale & Brinkmann 2009, 27, 130; Patton 2002, 343). Before the first interview, I had sent a questionnaire to the students concerning their musical backgrounds (Appendix E). The questionnaire covered the students' previous formal studies, their broader engagement in music and their habits of practice that I expected to be connected to aural-skills learning, such as playing by ear, silent score reading and improvising. I also asked them to list their recent piano repertory as well as pieces that they were currently practising. The students brought their questionnaire answers to the interview.

The initial interviews turned out to be the most valuable ones for the whole research project. I display the themes of my interview guides in Appendix F. I interviewed the students on their previous experiences in music, ideas and interests in musical development and habits of practice as pianists, as well as their expectations for the learning of aural skills. The themes reflected my conceptualisation of the research task at the time: I wanted to connect the course to the students' personal motivation to develop as pianists and musicians, and expected their everyday habits of working to be relevant to their aural-skills learning. Even though I later refined the theoretical approach and research questions, these themes retained their importance. I also discovered that the freedom of thought the students had prior to knowing more about the course, brought up some themes and ideas that were still worth returning to after the courses were over.

The interviews that I added to the middle of the second year were the most tightly connected to the practical work that was taking place in the aural-skills course. While useful for our cooperation, I viewed them afterwards as supporting and clarifying the information provided by the students' learning journals without bringing many new themes. In the middle interviews, I also decided to begin the meeting with each student by going through a set of aural-skills tasks that the students had prepared as a part of their coursework – which was likely to influence the interview towards conventional patterns of action between a teacher and a student. The final interviews, in turn, were somewhat between the two: some students returned to the broad interests they had brought up at the first interview, while also commenting on the practical work we had done on the course.

I had prepared my interview themes by discussing them with my fellow researchers, and also conducted a practice interview with a pianist colleague. I started the interview by a quick *briefing* of the situation and purpose (Altrichter, Posch & Somekh 1993, 103–104; Kvale & Brinkmann 2009, 128) – referring to the aim of seeking connections between the students' pianistic work and aural-skills learning, as I had expressed in my course announcement. I then found it comfortable to initiate the discussion by asking the students to describe which of their previous experiences in music they found most important. I went through the questionnaire that the students had filled in beforehand (Appendix E) and asked them to describe and reflect on their experiences. Next, we proceeded to the students' current interests and expectations concerning their musical studies and aural skills.

Especially some of the most experienced students surprised me with the richness of their interviews. The younger students were generally more concise in their talk, and I also recognised them as being more vulnerable to leading questions and other unintended influences – a problem I felt more strongly in the second year when most of the students were rather young. I made my best effort to express my interest in the students' ideas and experiences, and to avoid any normative comments or



expressions.<sup>66</sup> Nevertheless, the research process later made me increasingly aware of how the interview situation was still shaped by the typical power asymmetry between an interviewer and an interviewee (e.g. Kvale & Brinkmann 2009, 33), which was further reinforced by our roles of teacher and student. Quite obviously, the students strived to give a motivated, educated picture of their approach to music learning, and to emphasise their positive expectations even when their previous experiences had been negative. As I found afterwards, striving towards the positive was not necessarily an obstacle for gaining valuable data. Rather, the interviews became occasions in which the students expressed what kinds of values they found important to cultivate in their musicianship and how they thought their formal education could support this process. I will continue to discuss the implications of this research relationship in connection to the analysis of the data (Chapter 5).

I asked for the students' permission to record the interviews. In the first interview, I switched the recorder off at the request of one of the students during his playing of the score reading task, and another student's singing was excluded due to technical problems.<sup>67</sup> I reserved time after the interviews to go through the experience and to write down my notes and reflections. I also started the transcription as soon as possible so as to remember as closely as possible what I had experienced in the situations, and how the students' nonverbal communication had contributed to the message.

### **4.3.2 The students' learning journals**

I already informed the students in the first interview that I would ask them to keep learning journals throughout the course. I explained that the journal would be a means

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<sup>66</sup>Altrichter, Posch and Somekh (1993, 104–105) emphasise how teachers who interview their pupils need to adopt a consciously different approach to communication from the conventions of responding evaluatively to students' ideas that are typical for classroom interaction.

<sup>67</sup>Occasional problems with tape-recording caused some minor losses of data: a ten-minute section of one interview and three sections of the aural-skills lessons, each spanning half an hour, remained unrecorded. I consider the losses insignificant in the scope of the whole research, since the amount of data was large and I had also made detailed notes on the interview sessions and the musical tasks connected to them.

of learning, but that I would also wish to use the students' journals for my research data – which they all permitted. I gave each student a little notebook for the purpose, and they agreed that I would collect and read the journals once a month. In the first year, I expected the students to write the journals in connection to their homework, which gave highly variant results: some students wrote a regular, weekly journal, but a couple of students only occasionally wrote notes. In the second year, I scheduled an extra fifteen minutes for the weekly meetings, and reserved the last quarter of an hour for journal-writing after each lesson. This led to all the eight second-year students keeping a regular journal, and some students added occasional entries to their journals in their own time.<sup>68</sup>

My instruction for the journals was open: I asked the students to write down their comments and experiences after the lessons, and also on their individual practice. In the second year, when the journal writing was a regular part of our sessions, I usually wrote a few keywords on the board to remind the students of the lesson programme. I also gave the students in the second year some additional questions to reflect on in their journals. In October, I asked them to write about their aims for their aural-skills learning and about how they perceived the present course suited their aims so far. Before the students came to the interview in the middle of the second-year course, I asked them to read through their journal entries so far and to write a brief comment on how they felt about them. Before the exam at the end of the second course, I asked the students to write about how they felt about their skills. Some students also added their reflections after the final exam.<sup>69</sup>

With the rather open instructions, the individual students conceived the task of their journal-writing somewhat differently. Most students commented on how they

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<sup>68</sup>The students received the normal credit points for the course. Additionally, they received in the second year an extra credit point of 'optional studies' for the time they spent on the interviews and writing of learning journals - since I had lengthened the lessons, and the participation now clearly took some more time than a regular course.

<sup>69</sup>On various possibilities for journal instructions, see Lindblom-Ylänne, Levander & Wager (2002) and Moon (1999, 39–48), and in connection to aural-skills education, Davidson, Scripp & Fletcher (1995). I have also included in this chapter references to methodological literature that has been published after my data-gathering, and which I found useful for reflecting on my decisions. Besides methodological books, I found discussions with some colleagues useful when planning the journal use.

had felt about the activities in the lessons, some of them addressing the various tasks in a very detailed way and others picking up topics of special interest. In retrospect, I also found that my habit of writing the lesson programme on the board had probably contributed to the strong role the various aural-skills activities gained in many students' journals. The students' individual practice appeared in the journals in different degrees: some only quickly referred to having done their homework or not, while other described, planned and evaluated their practice in detail. Descriptions of personal feelings accompanied both the lesson programme and individual practice. Many of the students also included in their journals references to famous musicians, peers or friends, as they reflected on what kinds of musical skills they found important to pursue. Sometimes the students would voice direct suggestions to me as a teacher, or even send messages to the administration. I will return to analyse these differences in Chapter 9.

In the first year with those students who wrote regularly, and in the second year until the middle, I wrote a concise feedback, which I printed and attached to the students' journals (see e.g. Altrichter, Posch & Somekh 1993, 115; Lindblom-Ylänne et al. 2002, 345). Since we had agreed that I would regularly read the journals, I wanted to express that I was attentive and interested in their thoughts, and also wanted to help if the students had expressed difficulties or problems in their journals. I avoided evaluative comments, expressed my encouragement for the students' writing, but suggested some ideas on practice, or sometimes asked a further question on how the students thought about issues they had mentioned. Even though the students expressed positive comments on my contribution, I nevertheless decided to abandon the comments in the spring of the second year. Having felt that many of the students in that year were somewhat shy and easily accepted the teacher's views normatively, I saw that my intervention could still imply that I was evaluating their ideas. The rest of the journal material, then, was produced without my intervention of this kind.

Having first planned the lessons and experienced them from a teacher's viewpoint, I found the students' journals, together with my weekly listening to the

tape-recorded lessons, a useful way of getting an alternative perspective on the lessons. I made tentative analyses of the journal texts according to various analytical themes. For example, I paid attention to how the journals suggested the students' use of particular strategies for approaching aural-skills tasks. Nevertheless, the main function of the journals during the courses was to be a communication channel that gave me feedback and enabled the students to convey their experiences and viewpoints to me (Hopkins 1993, 122–123), and to know that I was attending to their learning. Before the middle and final interviews, I asked the students to read through their learning journals, and also picked up some themes in the journals on which I asked some further questions in the interview.<sup>70</sup>

### **4.3.3 The teacher's journal, lesson plans and lesson notes, and the tape-recorded lessons**

My notes, plans and reflections over the two-year period of teaching the courses are documented in three principal types of documents. I continuously wrote a *research journal*, made *lesson plans* for each lesson, and made *lesson notes* in connection to my weekly listening to the tape-recorded lessons.<sup>71</sup>

I have kept a research journal for the whole period of working on this dissertation, from the planning of this research in 1997. The text normally contains descriptions or memos on all the work that I did for the research project, and reflective notes, which comprise the most of the text. During the two-year period of teaching the courses, the memos and reflections concerning the course occupied the major role in the journal, and later provided useful data on my concerns and viewpoints while still teaching. The journal also includes memos on conversations with students, and factual information and reflections about the different practical arrangements of the research, such as sending the course announcements or arranging the interview meetings. I have also included in the journal documents on

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<sup>70</sup>For recommendations regarding students' reflection on their own journals, see McKernan (1996, 87).

<sup>71</sup>According to Altrichter and Holly (2005, 24), all the mentioned documents could be regarded as being parts of what they call a research journal. I will nevertheless use separate terms and references for the different documents.

communication such as e-mails or notes on phone calls, and notes that I made after meetings with supervisors or colleagues.<sup>72</sup>

I often reflected on my lessons plans in the research journal, but brought to the classroom a concise, hand-written, one-page lesson plan, which included the main activities and musical examples. After the lessons, I wrote short memos either to the computer I had in the classroom, or to my notebook by hand, and added them to my research journal when at home.

I asked the students for permission to record the lessons, just like with the interviews. To avoid any sense of covertness, I intentionally kept the recorder visible on the teacher's table. The students appeared to get used to the recording, which did not seem to make a difference to their musical actions: only a few times someone commented on the recording after telling a careless joke in our classroom conversation.

I regularly listened through the tape-recorded lessons: with only a few exceptions, within a few days of the lessons and before the next meeting with the group. I made notes during the listening, noting down the lesson activities and observations on the students' actions and our conversations. Since the listening was time-consuming and I wanted to continue it throughout the courses, I made an effort to limit the time that I used on the tapes. This meant that I wrote down many of the notes without interrupting the tape, and used some time at the end for additional memos and reflections. If the tapes contained information that I saw as worth returning to for later analysis, such as clearly audible documents of the students' musical tasks, I marked that down. I sometimes stopped to transcribe literally sections of conversation that I found important.

At first, I mostly treated my listening and note-taking as a transformation and reduction of the data into a more accessible form. As I later discovered, however, the lesson notes were quite revealing of my own focus and interests in various stages of the work. After finishing the course and taking some time away from the data, the notes revealed to me, for example, how my thoughts had been very much occupied with the concern of how to enable the students to reach the course requirements.

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<sup>72</sup>My inclusion of various types of records and reflections in the journal comes very close to the uses described by Fox, Martin and Green (2009, 148–149).

During the two courses, my listening had naturally served my refinement of practical teaching. A major benefit of the tapes, both during and after the two years of teaching, was to grant me the possibility to listen to the students' comments and suggestions without my mind being occupied with my teacher's tasks in the classroom. I often discovered, while listening to the tapes, that in the classroom I had responded to the students' single comments or questions without recognising the continuity between the same students' utterances. With the tapes, I might notice how a student was puzzled or trying to make sense of something, and trying to clear the situation by successive questions, which I first failed to grasp as continuous.

I also made an effort to reach a conceptual understanding and start the analytical process as soon as I began listening to the tapes. I made analytical notes and pursued tentative categorisations (see 5.2.1). Some of these early observations and interpretations later became a part of the more comprehensive analysis, which I conducted after finishing the courses. Others benefitted my practical conduct of the lessons but remained to be excluded from the final research questions.

Even though the tape recordings could have permitted many analytical viewpoints and provided materials for very detailed and elaborate analysis, I chose to give priority in this research to the students' learning journals and interviews. Therefore, I used the tape-recorded lessons and the lesson notes I had written while listening to the tapes, in a more selective way than the students' journals and interviews. After finishing the courses, the research journal and lesson notes were the most important sources, which I used to recall and analyse what had happened in the courses. I only returned to the tape-recordings to clarify themes that I had discovered as being important in the journals, interviews and lesson notes (see 5.2). The lesson plans were sometimes useful for reminding me of the origin and chronology of my thoughts. In both years I also wrote before the last interview summaries of the lessons over the year, which included the main activities and music examples. A translation of the second-year summaries is included in Appendix K (Lesson activities). Besides serving as a reminder for the students to discuss the course experiences, the summaries were helpful in the analysis of the data.

#### 4.3.4 Musical documents

My listening to the students' musical activities was naturally central to the pedagogical decisions that I made during the courses. The students' playing and singing were also documented in the tape-recorded interview sessions and lessons, and their written notations also illuminated some aspects of their musical activities. In connection to my transcription of the interviews, I listened to the tape-recorded musical tasks several times and made notes, and in my weekly listening of tape-recorded lessons and writing of lesson notes (section 4.3.3), the students' singing and playing were naturally of central importance and helped me to plan the next lessons. Despite the obvious role of these musical documents during the courses, for research purposes it was necessary to make clear decisions on their use. Obviously, an analysis of the musical documents could have become a central and substantial part of the research, and a topic of specific research questions. I even experimented with a detailed analysis of some of the musical documents during the courses, for example, I transcribed and compared some recordings on the students' aural imitation tasks in connection to the first interview. I chose, however, to give priority to the students' interviews and learning journals, and to use the musical documents, just as all the tape-recorded materials, for triangulating the interpretations I had made concerning the students' actions and progress while still teaching them. I used the lesson notes I had made when listening through the recordings as a reference to the places where I could find useful places if I needed to return to check my interpretations. This triangulation mainly supported my writing of the descriptions of the students' learning processes and pedagogical issues that I present in Chapter 6. Additionally, the recordings of students' musical tasks, which involved improvisation, illuminated their relationship with different musical genres, which I will discuss in Chapter 7.

In all, the following musical documents were central subsequent to the courses:

- The aural-skills tasks connected to the first interviews were of central importance, and I returned to them with each student. The students played by ear and harmonised a familiar song, analysed and imitated a section of a Mozart quartet from a recording, sight-sang a melody and wrote a familiar melody from memory (Appendix F/Interview themes and musical tasks). The differences between the students were clearest in their playing of a song by ear and writing

of a melody from memory. The aural imitation task represented a new type of activity to all the students and therefore did not show as clear differences between the students, but suggested that such type of work was accessible and meaningful to all the students. The sight-singing task complemented my view of the students' different profiles, and was very much related to how familiar the students were with this type of activity, and also provided on occasion for us to reflect on the students' singing experiences in aural skills.

- The musical tasks that the students prepared for the middle interview and for an individual meeting at the end of the course enabled me to check my interpretations of some students' learning processes. Since the tasks were based on music studied in the courses, I found it particularly revealing that some students' performance was much better at the lesson or the final exam when they could work on familiar music examples that they knew very well from the courses. Many students also described their problem-solving in great detail.
- I returned to selected lessons to listen to the students' sight-singing, group singing and improvisation tasks. I also attended to the advice and guidance that I had given to the students: both in order to clarify and articulate my pedagogical approaches and to critically evaluate them (e.g. section 6.2).
- The final exam contained dictations, aural analysis of harmony and sight singing (Appendix I/Lesson summaries). These tasks illuminated some aspects of all students' progress, but I also found it revealing to compare them with the documents of the students' performance at the lessons and in the prepared tasks.

My returning to selected musical documents was important to contextualise the students' first-person views on their skills and challenges, which they had expressed in the journals and interviews, and the interpretations that we had jointly constructed with the students during the courses. My listening to the tapes mostly suggested to me that the students' interpretations of their skills were very congruent with mine. When I found the views as departing from my own, I have discussed this in the text (Chapter 6).

The use of headphones in the classroom naturally reduced the number of recorded keyboard tasks. Not all the students' playings that I heard during my teaching were taped, either, because I also went round and listened to the students individually through my own headphones. To increase the number of recorded



examples, I sometimes asked the students to switch on the loudspeakers that were also provided in their keyboards, and play aloud in the group. Together with the interviews, I consider this documentation sufficient for the research questions.

I did not use specific formal methods for the analysis of the musical documents. Many of the observations that I based on them, however, could be connected to the coding categories and analytical themes that I developed in connection to the interviews and journals (section 5.1.2 and Appendix H/Coding categories). I also made some experiments with gathering and analysing musical documents, which I finally chose not to employ. I sometimes asked individual students' permission to record their playing through the MIDI output on the keyboards. I considered, however, that these recordings would not have yielded information that would have justified the rather laborious handling and analysis, and I also felt that such a mode of data gathering interfered with the students' privacy, which was one of the most positive aspects of the work in the piano laboratory. I also increasingly realised that I wanted to find an alternative to the convention of documenting and evaluating the students' aural-skills performance, without asking for their own perspectives on the choice of the tasks and type of documentation – traditional aural-skills tests being a typical example. I therefore decided to rely on such data sources that involved a dialogical relationship with the students. Even in the interviews, I felt it was important to treat the musical tasks more as source material for discussion, than as externally imposed evaluations of the students' skills.

The somewhat limited role that I finally chose to give the musical documents in the analysis of the data, was also connected to my developing view that the types of musical tasks in the courses were still somewhat limited regarding the students' personal contribution to music. I will return to this criticism in Chapter 9.

#### **4.3.5 The management of data**

Since the interview meetings with the students also involved musical tasks, the tape-recordings contained two types of sections: spoken conversations and sections dominated by music, with short verbal comments by the students and myself. I transcribed the spoken conversations word for word, with occasional notes to remind me of the students' or my own gestures that I had experienced as significant in the situation. In the sections dominated by music, I transcribed the speech selectively.

Much of the verbal communication during the musical activities in the interviews consisted of short, gesture-like expressions of encouragement ('mm', 'try again'), which only had meaning in connection to the music. I used a third party to transcribe approximately half of the interviews, which still required that I listen to the tapes and correct possible transcription errors.

I also transcribed the hand-written learning journals into text files. I indexed all the data with the date, type of data (lesson / interview / musical document) and the participant's name. I divided the interviews into units by numbering each pair of utterances (usually question / answer). In the journals, the writing dates provided a natural segmentation to be used in the analysis.

#### **4.4 My pedagogical background**

The practitioner researcher's professional experience and perspective naturally contribute to the research results. It is therefore worthwhile to note that I conducted the practitioner-research project quite early in my teaching career, but worked and participated in professional organisations during the years between the data-gathering and the completion of this dissertation.

I began the practitioner-research project after teaching the corresponding courses at the Sibelius Academy and Helsinki University in two academic years, and working as a part-time music-school teacher (the piano and 'fundamentals of music', see section 2.2.5) for five years. I had also studied the pedagogy of 'free piano', which contributed to my view that the students could often better employ their potential for learning in other learning environments than the traditional aural-skills classroom, especially in connection to their instrument. My background education was a Master of music in music theory, and a diploma in piano. I had also studied for one year (1994–1995) at the Zoltán Kodály pedagogical institute of music in Hungary.

During the years in which I conducted this research, I continued to teach, and also got to know the field of aural-skills education through international teacher exchange, as a visiting teacher, through teacher organisations and as a teacher educator. During the years 2000–2005, I participated through the Assembly of Finnish

Musicianship Teachers<sup>73</sup> in renewing the curricula for Finnish music schools for children and young people, and since 2010, I am a member a project group set by the Association of Finnish Music Schools for developing the ‘fundamentals of music’ in music schools. This experience, above all, gave me a perspective to judge what in the present project was worth being brought to broader awareness. Some of the issues on classroom interaction and practical conduct of lesson activities that I had attended to while teaching, for example, started to appear to me as related to my early stages in teaching. The relationship between formal aural-skills education and the students’ broader musical engagement, on the contrary, continued to appear to me as a topic that was illuminated by the present data in a useful way. I also saw that my conceptualisation of this topic in the present research was pertinent to the later aural-skills courses that I taught.

In the Sibelius Academy, I designed and conducted my practitioner-research courses as an individual project, which I discussed with other graduate students and my supervisors, but which at the time was not connected to broader curriculum development. During the years that followed the data gathering, however, I participated in the updating of the course descriptions and evaluation practices among the aural-skills staff, which involved slight shift of emphasis in evaluation to the students’ work throughout the course. Some other teachers also incorporated keyboard activities in their aural-skills courses after my project. I also took part in a development project with vocal-music teachers and participated as a member in a Nordic cooperation project between wind teachers and aural-skills teachers – both very much in the spirit of small-scale action research (Ilomäki & Järvelä 2009; Becker-Gruvstedt 2009). I decided to exclude this later cooperation from the present research and limit myself to the two years 1998–2000. I will, however, draw on this later experience when presenting ideas for further development of the present project (Chapter 8).

## SUMMARY

In the practitioner-research project included in this dissertation, I taught two aural-skills courses for performing and music-education majors who all had the piano (or

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<sup>73</sup>MUTES = Musiikinteoria- ja säveltapailupedagogit ry

harpsichord) as their major instrument at the Sibelius Academy, Finland. The central pedagogical ideas behind the courses were to create connections to the students' pianistic musicianship through keyboard work and to encourage their reflective learning through learning journals and interviews. My research data comprises twelve students' learning journals, half-structured interviews (2 or 3 with each student), my own journal and notes, tape-recorded lessons and documents of the students' work. At the time, the courses were not part of broader curriculum development in the Sibelius Academy, but my analysis of the data was influenced by my later teaching experience and cooperation with colleagues.

## 5 The methods and process of data analysis

In this chapter, I will explain the process and methods whereby I analysed the research data. I had designed my research so as to develop aural-skills education for pianists in practice, and to understand its processes and dynamics. During the research process, I focused my task and decided to give priority to analysis over practical development. Having worked and gathered data for two academic years with two successive groups of students, I considered that the data deserved thorough analysis before continuing to teach further. I also found that the present research design needed some rethinking before further action could bring essential new results. Moreover, as practical teaching methods were broadly developed in the field, I considered it more pertinent to contribute to research that would articulate the role of action in aural-skills education, as well as to analyse possibilities and constraints for connecting aural-skills education to instrumentalists' broader learning processes. I therefore decided to focus my research task on the articulation of the approach to aural-skills education that I was pursuing, on the basis of action-oriented educational and philosophical literature (Chapter 3). The practitioner-research project with my students became an example to be analysed and evaluated from this perspective.

I will first explain my analytical approaches and techniques, and relate them to some methodological literature (5.1). I will then describe the analytical process that led to the different chapters of this book (5.2), and conclude with some methodological reflections (5.3). Due to the complementary relationship between the evolving results and analytical concepts and techniques, section 5.2 already refers to some of my most central research results. I will provide a concise chronological description of how I came to the central themes of this research, and how I developed them through different analytical stages to the results, which I will describe in Chapters 6–9.

It is also useful to note that this research differs from many cyclical action-research models in which the analysis and reflection of one's results leads to further action cycles to test the evolving results.<sup>74</sup> Although I analysed my data and adjusted

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<sup>74</sup>Cyclical action-research models draw on the work of Kurt Lewin, commonly seen as a pioneer in action-research methodology, with various modifications suggested by subsequent authors (e.g. Elliott

my teaching during the courses and between the first and second year, the theoretical focus of this research means that I developed many of the central themes and concepts after finishing the teaching and related them to previous research and pedagogy, instead of testing them in further action. In many other respects, though, the analytical approaches are typical for practitioner research. Central to all analysis is the recognition of myself as a participant, and an endeavour to explicate the tacit understandings that both my students and I brought to the educational process, and to seek contrasting evidence and critical perspectives to develop them.

## **5.1 Analytical approaches and techniques**

Practitioner and action researchers commonly believe that the quality and rigour of their research is dependent on a general self-critical and ethically committed research approach, more than specific research techniques (e.g. Winter 1989, 8; Noffke & Somekh 2005, 91). In the analysis of their data, however, practitioner researchers have drawn on techniques from various branches of qualitative research, and have also developed specific ones for their purposes. I will in the following section first relate my research to literature on *reflection*, which has often been presented as a general characterisation of practitioner-researchers' analytical stance. Thereafter, I will explain my use of specific analytical techniques or viewpoints on the data.

### **5.1.1 Reflection as a covering approach to analysis**

As I described in Chapter 2, aural-skills educators' pedagogical tradition has very much been perpetuated through practical modelling, teaching materials and institutional routines. The decision to conduct a practitioner-research project in my own work meant that I would use and articulate my own pedagogical knowledge, its underpinning beliefs and values, and its relationship to tradition. The methodological discussion among practitioner and action researchers has particularly focused on possibilities to cultivate insight and development in work that the practitioner has typically learned by entering an on-going practice, which already involves its

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1991, 69–71; Altricher, Posch & Somekh 1993, 6; Fox, Martin & Green 2007, 50). For criticism of the models, see e.g. Somekh (1995, 342) and Noffke & Somekh (2005, 91). Cain (2008, 308) found in his review of action-research projects in music that not very many projects actually involved more than one action cycle.

routines, conventions and tacit understandings. In schools and other educational settings, lots of the practitioners' professional knowledge is embodied in tacit, everyday habits of action (see also 3.2). While necessary and potentially very valuable, these habits also perpetuate various implicit understandings that are not always congruent with the educational values that the practitioner would like to pursue. (E.g. Altrichter, Posch & Somekh 1993, 203–204; McNiff, Lomax & Whitehead 1996, 38; Elliott 1991, 143; Cochran-Smith & Lytle 2009, 45.) Besides practically derived knowledge, teachers' and other practitioners' work also tends to be influenced by propositional knowledge from various professional fields, which may acquire the role of an unreflectively accepted *status quo* (Fox, Martin & Green 2007, 25–41).

I consider the discussions on educators' habits, tacit knowledge and their relationships to explicit values, as highly relevant to aural-skills education. Particularly upon finishing the aural-skills courses, I discovered I was increasingly able to analyse many everyday habits and implicit understandings that seemed to be active in my work. I also found it useful to relate the habits in my work and working place to the broader field of aural-skills education and to compare them with the educational values that I consciously wanted to pursue. I also considered it very pertinent to my research that practitioner-researchers have defended teacher's professionalism against tendencies to reduce the teacher's role to that of a technician, who is only expected to 'apply' knowledge, or various methods, to reach prescribed learning outcomes. Instead, practitioner-researchers have emphasised teachers' importance as contributors to educational knowledge, which can promote educational practice that is ethical and reflective throughout its process. (Carr & Kemmis 1986, 1–49; McKernan 1996, 35–38; Cochran-Smith & Lytle 2009, 42, 45; Elliott 2009; Noffke 2009, 9–10.)

*Reflection* has become a key term for practitioner researchers' and action researchers' methodology (e.g. Boud et al 1987; Somekh 1995, 346; Fox, Martin & Green 2007, 184–185). A central source for many practitioner researchers is the work of Dewey, who uses the term to describe how people can approach practical situations in a way that is conducive to learning and intellectual development. In his book *How We Think* (1933, Dewey LW8), he refers to typical responses when people face a difficulty – such as abandoning the problem or uncritically accepting a solution that

comes to mind. Reflection, however, for him means the collection of observations, and thinking of possible courses of action in a persistent way, which may also require the suspension of judgement. As he describes: “Data (facts) and ideas (suggestions, possible solutions) thus form the two indispensable and correlative factors of all reflective activity”, which he also characterises as “an excursion from the actual into the possible” (Dewey LW8: 199).

The concepts of *reflection-in-action* and *reflective practice* by Donald Schön (1983, see also section 3.2) have also been central for practitioner researchers. Schön has paid particular attention to situations in which practitioners cannot go on with their previous perception of a given task, but need to redefine the problem they are solving and to reconsider what counts as relevant information to be attended. He describes how the *naming* of problems and the *framing* of their essential contexts is a key element of practitioners’ work. Skilful professional action also requires that the practitioners learn to develop one’s previous ways of naming and framing if needed. (Ibid. 40; see also Fox, Martin & Green 2007, 33.) Drawing on Schön’s work, Altrichter and Posch (1989) have pointed out how an essential part of action researchers’ analytical work is to become increasingly aware of one’s taken-for-granted ways of defining problems and tasks, and to seek alternatives to them. Indeed, it is possible to say that when analysing one’s data, the teacher-researcher is very much analysing oneself, and the more consciously this can be done, the more beneficial the research will be. The similar metaphor of reflecting back one’s perceptions and ideas from some surface is also *reflexivity*, which refers to the understanding of how the research is affected by the researcher’s position and perspective (Winter 1989, 39–46; Rossman & Rallis 2003, 49; Guillemin & Gillam 2004; Fox, Martin & Green 2007, 186–189).<sup>75</sup>

Even with their differing emphases, all the previously described conceptualisations of the researcher’s work are based on the idea that the researcher needs to make an effort to develop one’s practically derived experiences, and to use materials and sources that promote the questioning of taken-for-granted habits and understandings. Like a reflective lens or mirror that helps develop one’s thoughts, the

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<sup>75</sup>On the concepts reflection and reflexivity, see Fox, Martin & Green (2009, 186).



researcher can use various types of data, seek interaction with other people with contrasting interpretations, or relate oneself to previous literature.

The practitioner researchers' reflective stance typically manifests itself in such decisions as the gradual focusing of the research task, a conscious pursuit of seeing one's practice from alternative perspectives, and a constant search for contrasting evidence to one's first interpretations. Because educational goals and values often require a long-term reflective process to be fully recognised and explicated, practitioner-researcher literature stresses how the research task should be allowed to develop during the research process. The research task should accommodate the practitioner-researcher's gradually refined understandings regarding what kinds of processes and influences contribute to one's practice, and what actually constitutes improvement in one's practice. (Noffke & Somekh 2005, 91; see also Stake 1995, 33.) An essential part of responsible practitioner research, furthermore, is the monitoring of unintended outcomes or side effects of the planned actions and the comparison of one's explicit values with a careful study of how one's practice actually seems to be working (Altrichter et al. 1993, 157, 168; Cain 2008, 284).<sup>76</sup> Therefore, practitioner researchers tend to favour data-driven approaches to the analysis and to pursue openness and sensitivity to themes and viewpoints that emerge when pursuing the intended development.

In the present research, I pursued a reflective approach to my work when designing my data gathering. I sought different viewpoints to my aural-skills lessons by writing ideas and reflections when planning the lessons, by writing notes after the lesson, by listening to the tape-recordings afterwards, making analytical memos, and also by returning to the students' viewpoints through their journals and interviews.<sup>77</sup> I also consciously cultivated an open approach to the themes and issues the students brought up in the interviews. The clearest emergent themes and issues in this research

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<sup>76</sup>Practitioner researchers frequently cite Schön's description of what he call *move-testing experiments* (1983, 146). As Schön describes: "In more complicated cases, however, moves produce effects beyond those intended. One can get very good things without intending them, and very bad things may accompany the achievement of intended results. Here the test of the affirmation of the move is not only Do you get what you intend? but Do you like what you get?"

<sup>77</sup>*Analytical memo* is a term frequently used for the researcher's reflective notes written in connection to the coding of qualitative data (Saldana 2009, 32–44).

were related to the strong social dimension of musicianship and aural skills, which the students brought up in the interviews (section 5.2.1). Nevertheless, I realised after finishing the teaching and spending some time with literature, that I was able to pose critical questions to my work at a new level. One manifestation was the analysis of my lesson notes (section 4.3.3), which I had already pursued as I listened to the tapes during each week between lessons. When I later returned to the notes that I had made during the weekly listenings, however, my notes often appeared to me as useful evidence of my own frames of understanding at the time. For example, I noticed how at the time I had been very concerned with the students' progress in certain traditionally emphasised skills, such as pitch location (2.2.1 and), but later started to frame my questions somewhat differently and to ask why such goals were actually important in my work.

### **5.1.2 Specific techniques for the analysis of the data**

I chose the twelve students' learning journals and interviews to be my primary data sources, which I analysed systematically. I naturally read this data against the knowledge I had gained of each student as a teacher, seeking a holistic understanding of each student's interests, concerns and learning processes. I coded the data and applied some specific questioning techniques that have been developed for practitioner researchers.

*Coding* refers to a process whereby a researcher systematically goes through a set of data, pays attention to patterns of action and incidents that relate to the research task, and arranges the findings into verbally labelled categories (e.g. Bogdan & Biklen 1992, 165–172; Stake 1995, 29–33; Saldana 2009, 3; in action research, McKernan 1996, 223–224). Coding makes the researcher's analytical thinking formal and visible, and enables the researcher to enter a dialogue between the evolving findings and one's growing awareness of possible theoretical perspectives on the research topic (Bogdan & Biklen 1992, 175; Stake 1995, 33). I used systematic coding of the twelve students learning journals and the interview transcripts at various stages of the research process. As recommended for practitioner researchers, I began the coding soon after I had gathered the first data, but it was only after finishing the courses that I

found a systematic analytical framework for all of my data.<sup>78</sup> I discovered that the coding of the students' journals and interview texts was very useful for examining observations and judgements I had made in classroom situations; it ensured that I was not ignoring information that might contrast with my judgements during teaching, which I recognised as easily being shaped by my emotions and beliefs.

When going through my data systematically after the courses, I first coded the students' learning journals and interview transcripts separately, progressing through each of them systematically. Since the journal texts were much shorter, I coded them in smaller units, typically assigning several codes to one day's journal entry, while in the interviews I used one question–answer pair as the unit to be analysed. This means that the students sometimes reflected for several minutes on a question, which I coded as one unit. Later, I returned to code the data in a more selective and consciously thematic way in the service of the clarified research questions. I also later compared the different parts of the data, found some codes I was able to apply to both the interviews and learning journals, and became increasingly conscious of how and why the patterns of discussion were different in the aural-skills classroom as opposed to when the students discussed their broader engagement in music. I will return to the themes I found in this analysis in the next section (5.2).

In my analysis, I also employed some techniques that have been specifically suggested for practitioner researchers or case-study researchers for promoting reflective thinking about their work. I applied some principles and techniques that Richard Winter (1982; 1989, 52–55, 76; see also McKernan 1996, 142–145) has developed to make the practitioner researcher conscious of double binds in one's practice: pressures to act in diverse directions.<sup>79</sup> While people easily have the tendency to see in their practice independent, static categories, Winter's idea is to guide the researcher to organise the evolving findings so that they capture something of the opposing, dynamic forces, which seem to be active in a situation. (Winter 1989, 46–55.) He gives practitioner researchers very practical suggestions on how to analyse qualitative data so as to clarify and articulate opposing tendencies. For example, I

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<sup>78</sup>For the analysis during the fieldwork, I especially drew on the suggestions given by Bogdan & Biklen (1992, 154–165).

<sup>79</sup>Winter calls his suggested techniques *dilemma analysis* (1982), and the later elaborated version of it *dialectical critique* (1989).

found useful his suggestion for verbally formulating the competing goals or needs: “On one hand – on the other hand”. Some of these early analyses concerned those aspects of the courses that I finally chose not to include in the research questions, such as the social interaction between the students and myself in the lessons. Some of this analysis, however, became important for the results I have included in this book. In particular, I recognised how I often witnessed a conflict between my desire to promote the students’ discussion and reflection, and to use the lesson time for music instead of verbal communication (section 9.1).

I also formulated what I have called *pedagogical issues* in this research, drawing on the methodological suggestions that Stake (1995, 16–25) has given for case-study researchers on formulating questions that are likely to aid the conceptualisation of the research. Stake particularly aims his advice at researchers who are doing fieldwork on a case and are approaching it without prescribed analytical categories. I found his approach very valuable, however, for the purposes of practitioner research, and also for organising my findings after the aural-skills courses. Stake uses the term *issues* for the types of questions or problems that capture relevant and problematic aspects of the studied case, stimulate further questions, and help to raise the findings to a conceptual level (Stake 1995, 17–18). He describes the researcher’s conceptual work as a process wherein the issues can be reformulated and connected to new observations, together with the *progressive focusing* of the research task (ibid. 18–25). I describe some pedagogical issues, directly with this title, in section 6.2, but I also use Stake’s viewpoints to develop the contents of the other chapters.

To clarify the terms I will use when presenting my results, I will use the term *categories* for the verbal labels that I used at the beginning of coding process to mark the text sections to be analysed. I also refer to analytical *themes*, which I conceive as concepts that have already been linked to theoretical statements and viewpoints.<sup>80</sup> In practice, this means that my technical work with analytical categories led to the

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<sup>80</sup>I also referred in Chapter 4 to the *themes* of the students interviews – following the conventional usage in research literature. It is useful to note, though, that the planning of the student interviews represented a very early stage in the conceptualisation of the research topic, and therefore differ from the later analytical themes.

themes I will address when describing my results. The pedagogical *issues*, in turn, are questions that involve various themes.

## **5.2 An outline of the analytical process**

As is typical in practitioner research, the gathering, analysis and interpretation of the data became an interactive process. I worked on this dissertation for a lengthy time span: from the gathering of data in 1998–2000 to the completion of this book in 2011. Also, the reading of literature and the writing of the results had their contributions to the analysis of the data. Even if the borders cannot be strictly defined, it is nevertheless possible to distinguish the following broad stages in the data analysis process:

- analysis and interpretation in interaction with the students during the two aural-skills courses (5.2.1)
- the specification of research questions and theoretical perspective, and the systematic analysis of selected data (5.2.2)
- analysis connected to writing (5.2.3).

### **5.2.1 The aural-skills courses: interpretation with the students**

In practitioner research, the interpretations and decisions that people make in practical action and communication are already a part of the analytical process.<sup>81</sup> My choice of what to include in the aural-skills course, and the students' choices of what to discuss in the interviews, were therefore the first step towards the central themes of this research project. During the courses, we also contributed to the analytical process by interpreting with each student what essential skills were required and by what means to promote them, and how the course related to their broader interests and engagement in music. Towards the end of the two years, I had also developed an evolving awareness of how the present course design had some limits, and how our work did not quite meet the ideals for reflective learning and education, which I would consider optimal. The analysis and interpretation during the two years of teaching could be roughly summarised in the following statements:

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<sup>81</sup>On interpretation during fieldwork as a general characteristic of qualitative research, see e.g. Stake (1995, 8–9).

- The students' bodily habits were relevant for their aural-skills learning.
- The students' social networks as musicians, and their search for a place and identity as professional musicians were relevant to their aural-skills learning.
- The students faced different challenges in the course, which seemed to be related to their broader engagement in music.
- The aural-skills courses and the students' discussion of their broader engagement in music were not optimally connected.
- The course design was too fixed for the optimal promotion of the students' reflective learning and education.

By designing the courses, which involved keyboard work, interviews and learning journals, I already conveyed to the students the way in which I understood the nature of aural-skills learning: as something that was related to their habits of action as musicians, and their interests to develop as musicians.<sup>82</sup> The interviews gave me the possibility to get to know the students' musicianship in a broader way than was conventional in aural-skills groups, and the keyboard activities opened new ways of musical communication. During the first interviews and aural-skills lessons, both the students and myself had actually taken many steps towards *framing* (see 5.1.1) what belonged to meaningful aural-skills learning and its relationship to the students' instrumental musicianship, and what was worth taking into account in order to understand it.

In the interviews, the students eagerly accepted the invitation to discuss their musical backgrounds, habits of working, and interests of development. These interviews led me to realise the strong social component of the students' aural-skills learning. As the students discussed their interests and development needs, they repeatedly referred to famous artists, peers and various other people, and were clearly concerned about finding their personal place in the community of musicians.

I left the students free to discuss activities and contexts they considered essential for their musicianship. Many of them described at great length how they worked, and they also reflected on what kind of musicianship they considered

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<sup>82</sup>Unless otherwise indicated, I have combined my experiences with the first and second group of students into one description, treating the first and second courses as parallel versions of a similar process of interaction and interpretation.

valuable and respectable. Such talk was all the more interesting since some participants were already rather advanced in their master's studies and actively worked as performing musicians, but had left their aural-skills studies until their last study years.

In the course, it became apparent that the students had different challenges, which were connected to their broader engagement in music. The aural-skills tasks I asked them to do in the first interview indicated that some were already very fluent with melodic work, while some others needed to work hard to reach the course requirements. I also discovered the students' aural skills profiles as being connected to their broader engagement in music, especially their experience of playing music by ear as opposed to learning from scores. I noticed some of such connections in the first year, but they appeared even clearer in the second one, when the group included a broader range of musical backgrounds from a strong popular music experience to the harpsichord.

Upon having data from the two years, I found it possible to distinguish two very distinct types in the students' learning processes. On one hand, there were students who entered the course with rather secure melodic skills and mostly worked on their harmonic awareness. On the other hand, some students seemed to approach music more rhythmically and texturally and needed hard work to reach the melodic and pitch-location requirements expected from them in the courses. I found that these two types covered eight of the twelve research participants, with the remaining four students displaying some characteristics of both types (section 6.1).

I had felt when finishing the first of the two courses that despite the generally positive course experiences, we had still developed somewhat separate discourses concerning the aural-skills course, and the students' broader engagement in music. I also felt that I had not been fully able to employ the rich viewpoints that the students had brought up in their interviews, and neither optimally engage them in reflecting on their learning. Especially towards the end of the course, I still found our work rather technically oriented, and the students preoccupied with the need to master a set of course requirements. The students also seemed to discuss musicianship and music making in a much richer and more personal way in the interviews connected to their broader engagement in music, than when working and reflecting on their work in the aural-skills courses. I tried to bridge this gap in the second year by devoting attention

to the listening and discussion of music examples before technical tasks and by engaging the students in various kinds of discussions and musical tasks, which involved the sharing of views in pairs or small groups. Nevertheless, the second year did not abolish my feeling that I could only partially relate the course to the students' musical interests, and I also found a disconnection remaining between the students' discussions of musicianship in connection to their main instrument, and the data we produced in the aural-skills course.

I started to formulate many of the themes that led to the research results during the first year, but only the second year – with a larger number of students – enabled me to select and define the central themes. In this description, I have therefore combined the two aural-skills courses into one analytical stage towards the research results. After the two years, I found myself ready to finish the data-gathering, and accepted the remaining disconnections between the students' expressed interests and the aural skills course as an issue to be further analysed. The experience had convinced me of the importance of recognising the role of embodiment, and also the rich social aspects of aural-skills learning. I also increasingly realised, however, how even with my experimental course design, I had retained conventions of aural-skills education that were not really congruent with the educational approach I sought. We had followed rather traditional course requirements, the students had gone through previous aural skills courses and placement tests, and many of the lesson activities also had a firm background in the pedagogical tradition of aural skills. As I started to realise, many of these decisions actually reinforced a status quo rather than encouraged the students' personal reflection on what was valuable musicianship, and what kinds of skills they needed to pursue. How such influences shaped my work and how they could be changed in the future therefore became an aspect that I wanted to clarify in the theoretical and analytical phase of work, which was to follow.

### **5.2.2 The specification of the research questions**

After I had finished teaching, I found it possible to go through my data from an altered perspective, distanced from my concerns as a teacher, and also to relate my work to previous literature. Furthermore, from all the data I had collected, I selected for the systematic analysis the twelve students' interviews and learning journals, my



own notes, and in a secondary role, the tape recordings of our lessons (Appendix G/List of data).

As I described in the previous section, I had already developed various preliminary results during the teaching. To summarise, the following findings contributed to the way in which I specified the research task and research questions:

- I had sought an approach to aural-skills pedagogy that was connected to the students' bodily habits of action and their musicianship as instrumentalists. The students' interviews had also suggested to me that the meaningfulness of their aural-skills learning was connected to such social dimensions as various models, values and ideals for pianist musicianship.
- I found that previous literature did not very thoroughly address the embodied and cultural aspects of aural-skills learning that I had found important in my work. I therefore decided to focus my research on the explication of aural-skills education from the action-oriented perspective. My practitioner-research project became an example to be analysed from this perspective.
- The connection between the aural-skills courses and the students' broader engagement in music had as yet remained partial. In the data, the disconnection was visible in the rather different ways in which the students discussed musicianship in their learning journals and those interview sections concerning the courses, and when interviewed about their broader engagement in music. I therefore decided to address separate research questions to the aural-skills courses (Chapter 6) and to the students' reflections on their broader engagement in music (Chapter 7).
- The courses brought successful learning processes, but the present research design was still limited in involving the students' pianistic musicianship, and in involving their reflection. The rather fixed course requirements had clearly been a limitation. I therefore devoted one chapter to further possibilities for connecting aural-skills education to pianists' habits of musical action (8), and one for the further possibilities of developing the action-research design so as to promote the students' reflection (9).

### 5.2.3 From analysis to reporting

To clarify how I worked with my data in the practical sense, I will in the following section describe how I used coding and various questioning techniques to develop the results that I will present in Chapters 6–9. I will briefly sketch the central themes, which I will then fully explain in the respective chapters. The words in italics refer to the codes I used for the data and the themes around which I will organise my results. Appendix H includes a more detailed description of how I used the different coding categories to develop the results that I present in Chapters 6 and 7.

#### **The aural-skills courses: learning processes and pedagogical issues (Chapter 6)**

The students made lots of references in their journals to the *musical activities* that belonged to our aural-skills lessons. I began the coding of my data from the journals and as a basic form of analysis assigned categories to the different activities the students addressed in their journals, to see what kinds of work were prominent in each of the student's reflections. Besides the journals, I drew on a selection of musical documents from the course (section 4.3.4). I also coded my *observations on the students' learning processes* and their *strategies for aural-skills tasks*, which complemented my direct observations and my listening to the tape-recorded lessons. I decided to describe my students' learning processes in three groups: 1) 'melodically oriented' and 2) 'rhythmically and texturally oriented' students who had somewhat contrasting profiles, and 3) 'students with mixed profiles' who had shared characteristics with both of the previous groups (6.1). I also started to notice that the students' journal notes were sometimes more and sometimes less congruent with my interpretation of their challenges, which I had constructed during the course. Some of the 'rhythmically and texturally oriented' students, in particular, demonstrated more interest in the general atmosphere of the courses than in the specific challenges I expected them to tackle. The journals also revealed to me in retrospect how the students had had more critical thoughts on the course requirements than what I had realised while teaching. Gradually, I was able to specify my dissatisfaction with some of the aspects of the course, and formulated a set of *pedagogical issues* (6.2), in which I realised that my work was not yet congruent with my ideals of applying the action-oriented perspective to my practice. Such issues concerned our use of *playing by ear*

in the courses, the role of *pitch-location skills*, and the diverse functions of *singing* for the students' aural awareness.

In the later stages of the analysis, I returned to the data from a more selective viewpoint. I asked what was typical for those instances and examples in which the students had experienced that the study aural-skills was clearly meaningful and connected to their broader engagement in music. I discovered that the students' meaningful experiences often centred on the discovery of how they could broaden their musical habits of action, and how they could develop a knowledge base of possible musical structures, such as harmonic patterns. The students often spoke about how the special benefit of aural-skills education was connected to this breadth of practice and learning, which balanced the rehearsal of repertory in their instrumental studies. I organised these findings under the theme *flexible practice*, which became a covering concept for various sub-skills and development needs that the students connected to aural-skills learning. In my view, this idea was also very congruent with my pursuit of emphasising action and process in my aural-skills education: the idea of flexible practice directed the students' attention to how they could develop their skills and bring about changes in their active approach to music, and therefore was very well suited to my idea of shifting the responsibility and control of the learning process to the students themselves (6.3).

### **Student reflections on musicianship and aural skills (Chapter 7)**

In the students' interviews, their *values and ideals for musicianship* were prominent topics of discussion. Since I let the students talk about their typical ways of working and practising as musicians, the interviews covered various *musical activities*, and *contexts of musical action*, such as practice rooms, concerts, chamber music, or various contexts of music teaching. The interviews generally illuminated the students' *musical background* and their *broader engagement in music* besides aural-skills studies and formal studies in music.

Some sections of the interviews also contained discussion about the students' experiences with specific aural-skills activities, especially in the middle and final interviews in which the students reflected on their experiences in the courses. To this material, I also applied the category *strategies for aural-skills tasks*.

As hitherto mentioned, I found that we were not able to make full use of the rich interview material in the aural-skills course. When analysing my data after the courses, I therefore decided to analyse the interviews also from the viewpoint of how to further develop aural-skills education so as to have a better connection to the students' broader engagement in music. I compared the learning processes, strategies and pedagogical issues I had found in the aural-skills courses with the activities, contexts, and values that were prominent in the students' interviews. The ideal of *flexible practice* also appeared in the students' interviews and provided a linking idea between many students' aural-skills study and their broader engagement in music. I also found, however, some imbalance between the musical activities that were of central importance to the students, and those that had gained attention and emphasis in the aural-skills course. The findings suggested to me that aural-skills education could better employ the students' musical awareness, which is mediated by their instrument, and in particular, their experience of score-mediated music learning.

### **Aural skills and instrumental mediation (Chapter 8)**

In Chapter 8, I will further develop the findings that I presented in the two previous chapters, concentrating on the role of the piano in the students' aural awareness. I will continue to draw on my research data in this Chapter, but will also relate my findings to some more theoretical literature, and suggest ways to develop the musical activities used in pianists' aural-skills education.

### **Towards reflective aural-skills learning: critical viewpoints and further suggestions for the course design (Chapter 9)**

For my last research question, I used the data to evaluate how the practitioner-research project had succeeded in promoting the students' reflection and active role in their learning. Having perceived that the connection between the aural-skills courses and the students' broader engagement in music was still partial, I sought possible explanations for these limitations and also considered ways for future improvement. I chose to concentrate on two issues: how the students' interests and ideas on musical development could interact with the course contents, and how the students could use critical evidence to develop their thinking. I realised that these aspects had not been quite adequately attended to in my present research design. I therefore found it useful

to compare my findings concerning these two issues with suggestions given in action-oriented literature, and to suggest possibilities for further development.

The analysis and interpretation that led to the contents of Chapter 9 comes close to the work on analytical issues that Stake (1995, see section 5.1) has described, in which the findings, further questions and evolving interpretations refine each other. As a part of this process, I posed various analytical questions to the students' learning journals and interviews, which I found revealing with regard to how the students had now understood their role and task during the courses. In their interviews, the students referred to various *contexts of musical action* beyond the interview situation: practice rooms, concerts, or various contexts of music teaching. Their learning journals also contained such references, but I also discovered quite a lot of patterns that suggested that the students were treating the classroom as if it were a game with its own rules. In both their journals and interviews, the students made many references to *people and social relationships* when making sense of what kinds of musical skills they found important to pursue. They often talked about their peer students and famous artists. The students used their journals for different *functions*: planned and monitored their work, encouraged themselves, or sometimes made suggestions to me as the teacher.

After noting the limits that I still found in my practitioner research, in Chapter 9 I will include some further suggestions, by combining the viewpoints presented in Chapters 8 and 9. I will return to the suggestions for developing the musical activities in the courses, which I present in Chapter 8, and suggest how they could also offer ways to develop the students' reflection of their learning.

#### **5.2.4 Analytical perspectives through writing**

The process of writing this dissertation also contributed to the analysis of the data. I found it natural to write descriptions of the students' work and progress throughout the courses, and of my work with them, in a story format. The writing, however, made me increasingly conscious of the powerful choices of interpretation I was making when composing my findings into stories. Furthermore, I increasingly recognised how during the courses both the students and I had already turned our experiences into stories in interviews, journals and lessons, and made many choices about what to include and to exclude, and how to create continuations and connections between experiences.

The conscious use of stories for research and education is the topic of narrative research and narrative pedagogy, which has been a subject of vivid interest over the past ten or fifteen years. While I do not venture further into this field in the present project, I found some viewpoints brought up by narrative researchers to be very useful for my analysis. A key idea of narrative research is that people have a natural tendency to organise their experiences as stories and thus to bring meaning to their world by describing their experiences in a narrative form. This natural tendency can also be taken into conscious use. (Connelly & Clandinin 2006, 477.) By consciously attending to people's stories, by encouraging them to tell their experiences, and by describing those experiences interactively with them, educators can help people to give meaning to their experiences, bring their viewpoints together, and also find alternative ways of seeing their experiences. For action researchers, the conscious telling and retelling of experiences is a way to become increasingly conscious of one's perspective on one's own practice, and to learn to notice previously excluded viewpoints and possibilities (Pushor & Clandinin 2009, 293–296).<sup>83</sup>

In the students' learning journals, it was easy to see how, in particular, the students with problematic previous experiences often used their journals as a form of self-encouragement, with a clear tendency to tell a positive story and to see the present course and its pedagogical choices in a very positive light, and to convince themselves of how their possibilities to succeed in aural skills studies were now better than before. The cooperation between each student and I also involved the making of a shared story: we began with a certain judgement of the student's starting situation and needs, further negotiated the student's needs and challenges in the lessons, and told a story about the student's progress. This awareness, in turn, made me notice increasing possibilities in the data for contrasting interpretations to those I had done during the courses, and also made me realise how easy it was as a teacher to support and encourage particular types of stories at the expense of others.

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<sup>83</sup>I also found it useful to consider the stories that the students and I had produced against the criteria that Heikkinen, Huttunen and Syrjälä (2007) have proposed for judging the quality of action-research narratives. These authors draw attention to the researcher's ability to illuminate the historical continuity of the studied practice, the pursuit of consciousness of one's perspective and the ability to recognise alternative viewpoints (reflexivity and dialectics), as well as the usability of the results. (See also section 10.4.)

At a rather obvious level, some students' challenges and learning processes were clearly much more amendable for chronological descriptions in the journals than others. The easiest topics for description for the present students were clearly learning processes connected to the basic tools of music theory. The students who worked to develop their understanding of chord degree analysis, in particular, could easily produce progressive, chronological accounts of their learning, in which the different classroom activities were meaningfully integrated into their overall learning processes. Such student accounts were naturally easy to combine with my story of the course.

With some other students, a conscious attention to narrative aspects of the data made me notice conflicting elements to my expectations – such as the students' doubts on the relevance of some of the course goals. Even if I had recognised such questions by the students while teaching, and had made an effort to show my respect to them, I increasingly realised how the course design had not made it very easy for the students to organise the conflicting views into a coherent alternative story. There was, after all, no clear way for the students to put their critical views into action and to develop them towards any clear goal. The critical viewpoints therefore remained in the role of ruptures to the dominant story: politely expressed doubts, expressions of momentary frustration, or reflections on alternative goals, which nevertheless were not worked into alternative action plans.<sup>84</sup>

To do justice both to the convergent stories and the conflicting views, I chose to include progressive stories of the students' learning in this dissertation (section 6.1), but also to formulate pedagogical issues that provided contrasting viewpoints to them (6.2). Furthermore, my conscious narrative decision was to start the presentation of my results from the aural-skills courses in Chapter 6, and then return to the students' interviews for those ideas and perspectives that we had not as yet carried very far into practice (Chapter 7). The story through Chapters 6–9, therefore, treats my aural-skills

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<sup>84</sup>My discoveries of how some of the students' concerns and interests had not gained the attention they may have deserved can be related to the distinction between *emic* and *etic* issues that is often made in anthropology and other social sciences (e.g. Stake 1995, 20). Etic issues have been initiated in the research by the research community, while emic issues are those which interest or puzzle the participants. As Stake maintains, etic issues often need adjustment to fit the circumstances, and in an optimal case, emic issues can be related to the etic issues of the discipline.

courses not so much as the result of my work, but as a starting point that leads to themes and issues to be further developed.

I gave each participant a pseudonym that I use when quoting the students' talk or writing or when describing them as individuals. In connection to the aural-skills courses (section 6.1), however, I mostly refer to groups of students rather than individuals. The decision reflects my view that such description, which concentrates on the students' progress in various aural-skills tasks, still represents a very limited viewpoint to the students' musicianship, and does not really enable me to portray the students as musicians the way I think they would deserve.

### **5.3 Methodological issues and criteria**

I will conclude the present chapter with some methodological notes, which I see as useful to present prior to my results in the following chapters. In section 10.4, I will return to relate this research project to broader methodological discussion within practitioner research and qualitative research.

I consider that my research design meets the standard requirements of *informed consent*, *confidentiality* and *systemacy* of analysis, which are conventionally required of qualitative research (e.g. McKernan 1996, 241–242; Kvale 1997, 105; Christians 2005, 144–145; Merriam 2009, 229). I invited my research participants on a volunteer basis and asked their permission for my gathering of data through interviews, learning journals and tapes (see also sections 4.2–4.3). I also informed them about my maintenance of the anonymity of their data, and about their freedom to withdraw from the research. In the last interview, I confirmed the students' acceptance of my use of their data. Since I worked with the students weekly, gathered data through multiple sources, and spent considerable time on the chosen set of data, going through it systematically, I also consider that the present research meets the requirement of an adequate depth and systemacy of data handling, which at least is sufficient so as to avoid simple bias due to the possible neglect of information.<sup>85</sup>

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<sup>85</sup>Guillemin and Gillam (2004, 271–272) maintain that informed consent, too, depends on the researcher's and participants' interaction and is therefore not just a simple matter of asking the participants permission to the use of the data: "Informed consent is at heart an interpersonal process between researcher and participant, where the prospective participant comes to an understanding of



During the years that elapsed between the practitioner-research courses and the finishing of this dissertation, I did not cooperate with the students in the analysis and interpretation. Upon completing this dissertation, I e-mailed a letter to the twelve participants, thanked them for participation and informed them that if they had questions or wished to check something in the book, they could contact me. To the three students whom I chose to be cases in Chapter 7, I sent the descriptions with a request to comment if they wished. Since there had been so many years since the data-gathering, I did not ask all the students to check my texts or interpretations: I assumed recalling details after so many years would have been difficult, and the research was about their experiences as students, which time had already passed by the completion of this dissertation. All three students whom I had chosen as cases replied and confirmed that their information could be used, and one of them added some humorous comments, without suggesting any changes to the text. From the other participants, I received a confirmation of having received my message and some greetings, but not requests to check the texts.

In addition to discussing my project with fellow graduate students and supervisors, I asked a colleague of mine to listen to a tape-recorded lesson once during the spring of the second practitioner-research course and to comment and discuss with me the work in the course. As conventional, a colleague of mine was also present at the oral part of the final exams. Two teachers from the piano faculty also visited my lessons twice during the second course, connected to their interest in the possibilities of the ‘piano laboratory’ and the keyboard activities we used. The discussions with these four colleagues were useful for my teaching, but in my view, not very integrally connected to my conceptualisation of the results. Upon completing this dissertation, I also asked a colleague of mine, who worked in a music school, to listen to selected tape recordings and to discuss the description of the students’ learning processes that I had included in section 6.1. She listened to some examples of the tape recordings of the students’ playing by ear and commented on them, and we found her interpretations supported the division that I had made between different types of students’ learning processes. We also discussed the pedagogical issues that I

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what the research project is about and what participation would involve and makes his or her own free decision about whether, and on what terms, to participate” (ibid. 272).

had formulated concerning the less successful aspects of the courses (6.2), and she commented on the materials I was to include in the appendixes to support my description of the courses and the students' learning processes.

The two greatest limitations I perceive in the present research design and the data sources concern my strong reliance on verbal data for studying musical learning, and the students' limited possibilities to take part in the interpretation of the data, because so many analytical decisions only occurred subsequent to the courses. Since aural skills are mostly nonverbal skills, I conceive the interview and journal texts in this research not as self-contained objects of analysis, but as documents and reminders of processes that transcend language. The learning journals especially were only one document in the web of communication within our classroom, which I also experienced through my presence in the classroom situation and my weekly listening to the tape-recorded lessons during the two years of teaching. In my analysis of the journals, therefore, I drew on my experiences in the classroom and my listening to the tape-recorded lessons – in fact, the analysis of the journal texts was a conversation between the teacher's viewpoint while in the classroom, and the more systematic viewpoint I later used when going through the students' writing.

When working on the analysis, I used the journal and interview transcripts as the data that I coded and used as the basis of my analytical findings, but my judgements on what was important in the data were also based on the teaching experience and other documents (Appendix G/List of data). I sometimes returned to the tape recordings or documents of the students' work to check what had happened in the lessons. Of course, using the tapes as the main data would have given quite different analytical viewpoints and questions, especially if I had returned to them more extensively at the final stages of this research. I nevertheless considered the journal and interview materials an economical choice, which still captured many essential themes and issues related to the nonverbal dimensions of the students' musical learning.

With the interviews, it is even more important to acknowledge the limits of verbal data: with the exception of some musical tasks that the students performed in the interview situations, the interviews presented reflection *on* musical action, in which the students were mostly remote from the musical contexts and activities under discussion (see section 3.2.1). While it was obviously valuable that the students could

lead the talk to activities and contexts that were central to their musicianship, this also made the topics of discussion often distant in places. We had no possibility of going into the practice rooms, concert rehearsals or school situations that the students discussed, so the interviews came to represent their first-person viewpoints without the possibility to include multiple perspectives or evidence that would enable the students to find alternatives to their perceptions. I will return to this limit, and some possibilities for improving it in future research, in Chapter 9. Even with these limitations, however, the students' first-person viewpoints were nevertheless important to include. The data enabled me to draw attention to some connections between the students' aural-skills learning and their broader engagement in music, which can also be subjected to further research through other types of data.

When relating this research to the broader field of action research, it must be noted that my cooperation with the students in the interpretation of the data was limited. Whereas a large part of the methodological literature on action research is devoted to techniques that can be used in the joint generation and interpretation of data with the participants, the formal analytical techniques I have described were my personal tools, which I largely used after finishing the work with the students. This also means that this book is written in my voice; particularly in places where I have collected together several students' viewpoints, the terms are mine.<sup>86</sup> The requirements of an academic dissertation also necessitated a use of language that is often quite remote from the language I used with the students, and therefore departs from the ideal often suggested for practitioner researchers, i.e. to communicate in the actors' language. The distance from the participants' language is even greater, since I wrote this dissertation in English, whereas the data was in Finnish.<sup>87</sup> The possibility to work out the interpretations collaboratively with the students would have been

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<sup>86</sup>To note some possibilities of involving the participants further than in the present project, participants can be involved in the coding of data (Saldaña 2009, 28) or in the reporting of the research (Altricher, Posch & Somekh 1993, 181–182). For a discussion on the choice of voice in practitioner research, and techniques for involving multiple voices, see also Fox, Martin & Green 2007, 154–157.

<sup>87</sup>The choice of what kind of audience to address when reporting research is an issue that several practitioner and action researchers have recognised as being somewhat problematic. Somekh (1995, 350–351) maintains that action researchers can often disseminate their results best by writing separate publications for their practitioner and academic audiences.

complicated in this research, furthermore, due to the long time-span that elapsed between the courses and the completion of this dissertation.

My choice to give a theoretical focus to this research means that this book has been primarily addressed to researchers and pedagogues of aural skills, or more broadly to the fields of music education and higher education in music. I will, however, address some further possibilities to improve the sharing of the research process and the results with the participating students in Chapter 9.

## SUMMARY

Guidelines given for teacher-researchers' analysis of data stress a reflective approach, in which the researcher seeks to critically recognise beliefs and conventions embedded in one's work. Regarding specific analytical techniques, I coded the journals and interview transcripts and applied various questioning techniques that are recommended for practitioner-researchers. I also pursued analytical awareness of the students' tendency to tell progressive stories in their data, and conceived my own writing process as an analytical stage. The progressive focusing of the research task enabled me to shape the research questions and analytical themes so as to include topics that were central for the students. My analysis of the interviews and journals and the writing process, however, mostly happened without my cooperation with the students.

## **6 The aural-skills courses: learning processes and pedagogical issues**

In this chapter, I will describe the findings from two aural-skills courses that form the core of my practitioner-research project. The pedagogical ideal behind the courses was to relate aural-skills learning to pianist students' holistic musicianship, both regarding their musical backgrounds and future interests. I invited students with the piano as their major instrument for two successive courses and incorporated keyboard activities in the courses. I also encouraged the students to reflect upon their aims, needs and learning processes through interviews and learning journals.

As is typical for practitioner-research projects, my endeavour to know and educate my students in a contextual way also led me towards a growing awareness of the contextual nature of my own teaching. Even though I had changed some aspects of the learning environment in which the students and myself had previously worked in aural-skills courses, I also drew on activities and pedagogical approaches that I had learned as an aural-skills educator, and which are typical of the pedagogical tradition of this subject. By the end of the courses, the students were expected to meet traditional requirements of writing melodic and rhythmic dictations, analysing harmony by hearing, and sight singing and rhythm reading (Appendix D/Course description). As I increasingly recognised during the research, my choice of activities and goals for the course influenced the different students' possibilities to display and employ their musicianship in the courses, and my ability to encounter them as musicians.

With the threefold structure of this chapter, I seek to illuminate the developing perspectives that the research process yielded to my work with the twelve students. In section 6.1, I will first describe the students' learning and working processes during the courses. In this section, I wish to remain close to the perspective that I had on the students' learning while teaching the courses. I will also describe my growing awareness of how the students' ability to participate and succeed in the courses was not only a result of their musical skills, but also of the connection between their previous habits and the activities and approaches used in the courses. In section 6.2, I

will discuss some pedagogical issues in which I discovered that my work was not very congruent with what the action-oriented concept of aural-skills suggests as being effective and justified. In section 6.3, I will describe how the work with the students also involved learning to discuss the aims and nature of aural-skills learning in a way that was meaningful and connected to the students' pianistic work.

## **6.1 Challenges and processes in the aural-skills courses**

I will now describe the learning processes that different students went through in the courses, based on my experience of working with the students and my analysis of the students' learning journals, interviews and selected tape-recordings of their musical tasks. First, however, I will clarify some decisions regarding the viewpoint of the descriptions and my use of the research data as their basis (6.1.1).

### **6.1.1 Choices in analysis and description**

The participating students shared an interest in the idea of learning aural skills through keyboard work, but had very different previous experiences of aural-skills learning. The aural-skills tasks in connection to the first interview revealed that their starting levels differed widely, particularly regarding skills that required pitch location, such as sight singing or aural transcription of music. While all participated actively in the courses, some activities and approaches were clearly much closer to some of the students' existing habits of musical action than others.

As I described in section 5.2.4, both the students and I quite naturally displayed the tendency to tell progressive stories about the students' learning, as we worked during the courses – which I adopted into a conscious analytical viewpoint subsequent to the courses and which I also used to reflect critically on my teaching. I will continue to use a story format in the following sections and will endeavour to remain close to the viewpoint that I had when teaching the courses. I will therefore focus my descriptions of the students' learning processes on melody and harmony, which gained most attention in the courses. Melodic and harmonic tasks generally posed the most challenges to the students, and also suggested the clearest connections between the students' processes and profiles in formal aural-skills education and their broader engagement in music. Harmony had also been one of my special topics of interest

when planning the courses, due to the disconnection that I had often found between vocally oriented aural-skills education and pianists' typical activities (see section 3.4.3). Rhythmically, the courses did not challenge the students to an equal degree as melodically and harmonically, although some students could have obviously taken more challenges than what the course gave them.<sup>88</sup>

In the individual student's learning process, I focused my analysis on tasks and skills that required the students to learn new habits of action. In other words, I devoted special attention to processes in which the students did not simply improve their existing skills, but learned how to approach and practise music in new ways.

To explain how the students' aural-skills learning appeared to be connected to their broader engagement in music, I placed the students in three groups. Firstly, five students had a similar profile in that they started the course with an already fluent skill in sight singing or melodic writing, and mainly developed new skills in the harmonic analysis of music. Secondly, three students entered with major difficulties in any skill that required pitch location – melodic writing, sight singing or harmonic analysis by ear – but had strengths connected to more global types of musical awareness. Thirdly, I will discuss four students who had similarities in their backgrounds and skills with both of the previous groups. For the sake of convenience, I will in the following text call the first group of students 'melodically oriented' and the second one 'rhythmically and texturally oriented'. I will simply refer to the remaining four students as 'students with mixed profiles'. My intention is, however, not to suggest the grouped students' similarity as individuals, but to point at similarities in their processes and skills as seen in the courses, which also seemed to have some connections to their broader musical engagement.

During the teaching of the courses, I had listened weekly to the tape-recorded lessons, but in later stages of the analysis and in writing the following descriptions I gave priority to the students' learning journals and interviews and my journal. I specify in Appendix H (Coding categories) how the data supports the findings that I describe in this chapter. I used the tape- recordings selectively to check interpretations that I had made on the basis of the journals and interviews, and also chose a limited

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<sup>88</sup>I will return in Chapters 7–8 to relate my practitioner-research project to some recent authors' criticism of traditional aural-skills education owing to its undue focus on pitch (section 2.2.3).

selection of recordings that I considered revealing of the students' different processes. I also checked my interpretations with a colleague (section 5.3).

In all, I will address the following points and apply them to each group of students:

- the students' expectations for the course and previous experiences of formal aural-skills education
- the students' aural skills at the beginning of the courses, as evaluated and discussed in the first interview
- the students' musical background and interests, as expressed in the questionnaire and interviews
- the students' encounters with the activities and requirements in the courses, skills and tasks that had the most attention in their learning processes, and problems and solutions they experienced, as portrayed by the data
- reflections on the course and learning process at the end, both from the students' and my viewpoint as the teacher.

I excluded from the descriptions some information about the students' musical backgrounds, which did not suggest a connection to the students' performance or processes in the aural-skills courses. I specify in Appendix H some of these additional findings.

In the text, unless otherwise indicated, I have combined the material from the two courses (1998–1999 and 1999–2000), and the previous groupings also combine students across the two years. Even though I made some changes in the programme in the second year (see 4.2.4), the course contents were basically similar, and the students' learning processes involved very similar stages, which I see as justifying their joint description here.

### **6.1.2 Melodically oriented students' development of harmonic vocabulary**

Five of the twelve students had some similarities in their general approach to music, which could be characterised as rather melodically oriented. Three of these students were music education majors and two were performing majors. All five had sung in choirs as children or teenagers, and many of them also expressed how they had enjoyed various singing-related activities among friends or family members or in school. All of them recalled how some form of playing by ear or playing and singing



tunes had belonged to their early activities with the piano. Later, they had conducted classical piano lessons until entering higher education, and besides one student who still frequently played by ear or improvised on her own, the students described how their playing by ear had dropped into occasional searches for tunes on the keyboard. The five students started the course with a strong performance in traditional aural-skills tasks – especially melodic work – and spent most of their efforts during the courses on harmony. They also described their pianistic work in ways that suggested the importance of melodic thinking.

The five students described their interests for the course by referring to keyboard-oriented work and their desire to connect their aural-skills to their piano studies. The aural-skills tasks in the first interview indicated that they could notate and sight-sing diatonic and simple chromatic melodies without difficulty. They had also managed their aural-skills courses at the pre-professional level without much difficulty, even though many of them had ideas regarding how aural-skills learning could be more related to their work and musicians. The students' security in melodic tasks seemed to be related to their ability to *mentally project* melodies to the keyboard (section 3.4): to conceive melodies as consisting of certain pitches on the keyboard. At the beginning, the students could notate music or aurally recognise chords when thinking in keys that involved few accidentals, and some of them even had the habit of imagining aural-skills tasks in C major or C or A minor regardless of sounding pitch.<sup>89</sup>

The tasks in the first interview demonstrated that the students' skills in playing by ear differed. All five had a basic ability to harmonise songs and find melodies and chords by ear using diatonic and simple chromatic material, but four of the five were much more fluent with playing melodies than in harmonisation, and three students characterised their playing by ear as very insecure and wished to gain more confidence in it. Four of the five students had also participated in 'free piano' courses (section 2.2.5), and playing from songbooks and lead-sheet notation was quite familiar to them.

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<sup>89</sup>Two of the students seemed to have a strong memory for absolute pitch and found it important to sing music at the notated pitch. Otherwise, the students might often project music to keys with few accidentals regardless of absolute pitch.

The students appeared to join in the various activities of the aural-skills courses fluently and naturally. Aside from the keyboard work, which had been their main interest for joining the groups, all of them commented positively on the usefulness of the various singing exercises in the courses. Many of them also described their piano practice in ways that revealed how singing and a melodic approach were also central to their rehearsal and memorisation of repertory. The following quote is from an interview with Kaisa, a music education major, who felt that the ability to sing characterised her most satisfying experiences of having learned a piece properly:

*Lotta: What do you think happens when you have the time to let [the piece] mature?*

*Kaisa: It is difficult to explain. It is like it is in one's bones, so that you can almost sing it while you play. The fingers are not just doing something, but you know after each tone, what the next one is... [...] Yes, when I walk somewhere, my finger might play, as I hum it in my mind... (Initial interview.)*

The clearly dominating role in the five students' journals and reflections was given to the study of harmony – especially harmonic analysis through listening. The development of this skill was the five students' central topic of interest, which they had already expressed in the first interview. In particular, two music-education majors described in a detailed way in their journals over several months how they gradually expanded their knowledge of tonal scale degrees and their characteristic usages, and learned to analyse music by hearing. The three other students had more previous skills in the analysis of harmony even at the beginning and therefore did not demonstrate such a visible change, but nevertheless showed an interest in the study of harmony, worked on it, and discussed it in their learning journals. While they had less rudimentary harmonic theory to learn, they were very interested in making their harmonic awareness more practical so that they could really recognise harmonic patterns in various pieces and textures.

The two students who provided the most detailed descriptions about their learning of harmony in their journals, showed a process during which their journal entries first concentrated on chords as technical building-blocks of music, but

gradually became more linked to experiences of musical expression and style. For a long time, the two students seemed to be occupied with rather rudimentary knowledge of music theory, such as how chords retained their quality and interval structure when transposed to different keys. Such knowledge was obviously not totally new to the students, but they seemed to find it important to explore the basics of chord construction on the keyboard, and especially to transpose harmonic patterns to different keys, before the chord degree system started to feel familiar and natural to them.

Only after some practice in chord construction did the two student' reflections start to involve references to the characters, tendencies and stylistic usages of chords at different scale degrees. The journal entries demonstrated that the students' interest turned to the possibility of using harmonic symbols to describe experiences that were related to musical expression: feelings of tonal tension or forward motion, or the characteristic flavours they discovered chords had according to their position in tonality. Ostensibly, the students started to conceive the chord-degree concept as a tool that helped them to bring together musical experiences from different pieces and textures and recognise some likeness in their musical character. An idea that seemed to fascinate all five students was that situations in common-practice harmony could be described by a limited vocabulary of harmonic units, chords or harmonic patterns: mapped together in a way which made the harmonic world appear more understandable and structured.

The students' reflections during their learning process with harmony also suggested that their growing fluency with harmonic symbols was connected to a perceptual change. During intermediate stages in the students' learning of chord-degree analysis, their learning journals often demonstrated problems with grasping music in harmonic units that would be practical for the task at hand, or with directing attention to the appropriate dimensions in music. In the autumn, especially the two previously described music-education majors often complained of the awkwardness of having to count discrete pitches for constructing chords when playing or analysing them through listening. They also repeatedly noted their difficulties in following bass lines or

discerning chords in the musical extracts to be analysed at lessons. Apparently, they often attempted to track the individual pitches belonging to each chord. Towards the end of the course, however, these difficulties lessened or even disappeared. As acknowledged by the students, a gradually developing sense of the typical usages and global characteristics of different chord degrees rendered it unnecessary to distinguish the constituent tones.

Even though the ‘melodically oriented’ students wished to develop their harmonic awareness, they obviously had a wealth of previous knowledge related to tonal harmony. They had practised classical pieces from scores, played songs or popular music from lead-sheet notation and had used chord-degree analysis in music theory lessons. Many of them, however, described a feeling of having not quite been able to integrate the types of harmonic awareness which they had learned in different contexts and expressed delight when they felt that they were able to make connections.

*Fifth sequences start to enter my mind from the old ‘free piano’ lessons – I am happy to find that these issues start to connect to each other. It’s interesting to hear about structure and form in baroque music – we are studying similar things in the theory course. (Veera, learning journal, November 11, 1999.)*

The participants generally found it much easier to grasp chords vertically than to follow contrapuntal lines. One music-education major among the ‘melodically oriented’ students, however, had practised her choir repertory for years by singing one of them and playing another – and found it very easy to notate and imitate music as contrapuntal lines. Until the middle of the course, she in turn described difficulties in proceeding from the notation of the outer parts to the analysis of the harmony, but finally overcame the difficulty. As she carefully described, she practised chords by singing them in arpeggios and also consciously paid attention to qualities and characteristic usages of different chords, thereby overcoming the need to distinguish each individual tone.

Simultaneously with their participation in the aural-skills course, the students studied courses in music theory, which certainly contributed to the learning processes

of harmony that became visible in the data. Interestingly, though, many of the ‘melodically oriented’ students admitted that their studies in music theory had remained somewhat disconnected from their musical experiences: theoretical terms had rather referred to notes on paper than to musical situations. The problem seemed to be connected to the difficulty that many of the students felt when analysing music through notation or silent score reading alone: they felt it necessary to play the music before they could really experience the sound of the structures they were analysing. Much of the interest that they found in harmonic analysis during the practitioner-research courses, therefore, seemed to be derived from the discovery that they could also learn harmony through singing and hands-on exploration on the keyboard. The following quotations from Taina, a music-education major, illustrate her frequent references to the importance of keyboard work, which she would also have wished to use in music-theory courses:

*It is important for me to be able to practise the contents taught at lessons through playing. Only then do they have a meaning in sound. On paper the music does not feel anything. Could theory perhaps be also more connected to aural skills and to practice? I would certainly understand it better then, too. (Taina, learning journal, October 3, 1999.)*

*I feel that without the piano the revealing experiences about new chords might not have occurred at all. The piano is such a practical tool, and you have the whole scale there in front of you. By transposing, the keys appear in a different way than through playing scales or in my own pieces, each tone of the scale gets its own function, which is retained in different keys. (Taina, learning journal, January 2000.)*

When evaluating their experiences at the end of the courses, the ‘melodically oriented’ students were very positive. They had made the kind of progress they had desired and voiced their delight about the new ideas for practising that they had received. The two performing majors who were already rather fluent at the beginning were also satisfied: even though their progress was not as visible as the others’, they stressed the useful perspectives that they had gained on their learning of harmony.

### **6.1.3 Rhythmically and texturally oriented students learning melodic tasks**

Three other participants, all performing majors, had a very contrasting profile to the previous group in aural skills. They had experienced aural-skills courses as being highly problematic, were used to score-mediated learning, and made the most visible progress in the courses in their melodic skills. The students were all advanced and active instrumentalists who seemed to plan their repertory very independently, performed frequently, and were active as chamber musicians.

All three students described major difficulties in their previous aural-skills courses. They had found the courses frustrating and even frightening, felt unsuccessful, but somehow also had the feeling that they did not quite get the idea of how such practice was supposed to benefit their musicianship. Common to many of them was a sense of not knowing how to effectively approach aural-skills tasks. The students' problems, in further discussion, turned out to concern melodic and harmonic work in which they needed to remember melodic lines and to locate pitch. In connection to the first interview, all three began the melodic writing task, but did not finish it and admitted how they did not really know how to solve it.<sup>90</sup> All three described how they often felt difficulties in remembering melodies. They did not seem to have a strategy for rehearsing the melody and comparing its pitch relationships and could not suggest any means of checking their notated pitches other than playing them on the piano. Rhythmic tasks and some types of harmonic analysis turned out to be less problematic for most of the students, which, however, had not abolished their overall experience of inferiority in aural skills.

The students had started their piano study at the age 6–8 and appeared to have quickly proceeded into demanding piano repertory. As they recalled, they had learned to read music notation from the very beginning, whereas singing had not been involved in their elementary piano studies. Their interviews suggested that they were all very thoughtful about their habits of practice and were eager to develop them. They

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<sup>90</sup>I did not insist on all students completing the written assignment (see Appendix F/Musical tasks connected to the interviews and Appendix H/Coding categories). The seven students who could manage it by themselves completed the writing, while with those who could not proceed, I discussed their strategies and experiences for a while and moved on to the next task.

mentioned different development interests. One student described how he had recently sought to develop his practice in an increasingly concentrated and thoughtful direction and also become interested in literature about musical styles and performance practice. He described how he sought to find an appropriate character to the music that he played, to locate it in a stylistic context and to articulate its structural design and cadential patterns. Another student's reflections centred around his search for unity between stylistically sensitive playing and personal expression – aims he had sought by working on the same pieces over an extended period of time, letting them mature and retuning to work on them. The third student mainly described her endeavour to expand her technique and to maintain disciplined and organised practice. The rhythmic characterisation of pieces and sections of music, and textural and polyphonic work were central to all three students. Their discussions also gave the impression that the students' analytical awareness of notated music, their technical command of the keyboard and their kinaesthetic anticipation of music were in tight unity.

All three students had sometimes had problems with memorisation. One of them had recently decided not to perform pieces from memory so often, while the two others described how the problems had disappeared in a way that they felt was connected to their technical security and ability to remember movement patterns. One of the students also reflected on his tendency to remember pieces in a rather general and harmonically oriented way:

*I think I learn pieces by heart as harmonies. When it sometimes occurs to me to play old pieces, and I do not really remember what happens there, but only what the general harmonic structure was. They become types of improvisations, those pieces, there is something of the composer, but a lot of my own...of a similar style. [...] So, not individual notes but just the general pattern. Or what kind of tension there is. [...] It's very easy to grasp old pieces so that they go as though from one hill to another hill. (Panu, classroom discussion, October 23, 1999.)*

Both the two male students in the ‘rhythmically and texturally oriented’ group had some audible difficulties in sustaining pitch, but emphasised that singing was central to their instrumental practice when they sought to give shape to melodic or polyphonic phrases.<sup>91</sup> One of them had also sung in a school choir while in upper secondary school – as with many other participants.

Following their negative previous experiences, during the first weeks the three students’ learning journals were mostly concerned with the general feelings regarding being on the course, and the atmosphere in lessons, more than any specific aspects of aural skills. The students expressed their delight at the situation wherein no one needed to be publicly exposed as having a lack of skills, since they could work individually with keyboards. They were also satisfied that we initially did much of the problem solving with the dictation and aural analysis tasks jointly in the group. Later, the students started to refer more to specific tasks and strategies, but never in the form of clear, progressive narratives, which were typical for the ‘melodically oriented’ students.

I generally found that the three students tended to approach music through its rhythmic structure, texture and overall character. In both melodic dictations and harmonic analysis, the students usually found it easiest to grasp the structure and phrasing of the music before going into detailed notation or even imitation. They seemed to have somewhat rough and global kinds of harmonic knowledge, which was very helpful in tasks wherein the students could approach music in broader units than individual chords. The dictation strategy I suggested in the first lessons of the second year appeared to be especially helpful for these students: listening to phrases first, notating rhythm before the pitches and starting harmonic analysis at cadences. Nevertheless, the students recurrently noted a discrepancy between their perception of harmony by listening alone, and with the aid of scores: tasks which felt demanding in aural analysis often turned out to be ‘basic structures’ when translated into notation and chord symbols. All three students expressed how they had found music-theory courses much easier and more meaningful than aural skills courses, and found it

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<sup>91</sup>Among the twelve students, six had played woodwind instruments, and the music education majors’ current studies involved band instruments. I did not find any clear connection between the students’ second instruments and aural-skills performance.



relatively easy to analyse harmonic structures with scores. When required to recognise harmony without the score, they found themselves collapsing to a much more basic level.

All three students expressed their delight with having the possibility to use keyboard activities to practise melodic and harmonic aural-skills tasks, which all of them found demanding. I also used typical tools of traditional, vocally oriented aural-skills pedagogy to guide the students in learning pitch-location skills (section 2.2.1). The students seemed to benefit from my prompts to sing the melodies to be notated, and to learn to produce and recognise different melodic scale degrees. With regular practice, they developed their ability to follow melodic lines and to recognise specific pitches or scale degrees. There was a clear stage in each of the three students' learning process, in which they noticed their ability to correct themselves and to know whether they were singing or writing the correct melodic degrees and intervals. They expressed their delight in a new feeling of security and independence, even if the melodic work still continued to be rather laborious. For the two male students, vocal production continued to be uneasy, whereas the female student progressed quickly in sight-singing after this stage.

In the aural analysis of harmony, the students proceeded much more slowly and frequently expressed a sense of frustration in their journals. For a long time, they could analyse harmony in a somewhat intuitive and rough level: recognise harmonic functions and make guesses based on what kinds of harmonic patterns could be tonally anticipated. This skill, however, seemed to be very difficult to connect with their newly developed melodic skills. The students knew they could laboriously produce correct results by singing bass lines and recognising their specific pitches, but often found such an approach very slow and impractical, and felt themselves losing their sense of musical motion and expression. They often resorted to quick, global guessing, which was more natural for them but never quite secure.

In their journals and interviews, the students often reflected on aural and score-oriented approaches to music learning. They noted how the skills visible in aural skills classroom were rather understandable on the basis of the very different approaches to

music learning that they found even among the group. They also referred to peer students or even cited anecdotes on the value of playing by ear among pianists. They voiced some politely critical thoughts, however, on the choice of goals and priorities in aural-skills education. Although they expressed their respect for aural work, they regretted the need to return to musical examples that were so concise in size and simple in structure. Even if they noticed how they could, with practice, improve their recognition of specific scale steps and their memory for melodic lines, such a route also appeared to be very slow and not always very easily connected to their broader engagement in music. Such requirements easily made them sense their musicianship narrowing rather than broadening in the aural-skills classroom. They also sometimes brought up in discussions how they were able to use a global kind of anticipation in their score-mediated learning of piano music, which was different from the detailed worked developed by sight-singing (see section 6.2).

By the end of the courses, the students had improved their skills so as to meet the minimum requirements of the course.<sup>92</sup> Their ability to learn music by ear and to remember aurally learned material still seemed to be limited, and their progress in harmonic analysis and transcription therefore became most evident through the prepared tasks, which were based on previously learned material and did not challenge their memory too much. While they expressed their joy in mastering a previously very difficult project, several of them added to their reflections on the course that some change of emphasis would be worth considering: some of the detailed work could be replaced by more extensive music examples if they were approached by other kinds of activities, such as doing aural analysis partly with scores.

#### **6.1.4 Students with mixed profiles**

The four remaining students, who were all music education majors, had similarities in their skills and processes with both of the previously described student groups. Firstly, two students had many likenesses in their general approach to music with the

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<sup>92</sup>Two of the *rhythmically and texturally oriented students* complemented their course by doing a set of aural transcription tasks after the final test as a result of their insecure performance in the dictation and aural transcription tasks in the exam.

‘melodically oriented’ students, but lacked a similar security in melodic skills and the ability to project pitches onto the keyboard. They needed to work both for their pitch-location skills and harmonic awareness and went through a process that combined many characteristics of the two previous groups. Secondly, two students were much more accustomed to playing by ear than the other students. They had similar skills of mentally projecting pitches onto the keyboard as the ‘melodically oriented’ students, but were more oriented towards harmony, which they could also grasp on the keyboard quite fluently.

The two students who worked on both melody and harmony were both music education majors. They were also advanced pianists and taught piano pupils. They too had experienced their previous aural-skills studies as being highly demanding. They had no problem with singing as such, but were insecure in pitch-location and did not complete the melodic writing task at beginning of the course, just as with the ‘rhythmically and texturally oriented’ students. One of them had only started piano studies as a teenager and entered the music-education programme after education in another field, although she had sung in a choir for years as a child. The other one had started Suzuki piano lessons early and wanted to devote attention to her piano studies, although she was majoring in music education.<sup>93</sup>

The two students’ learning processes in the course could be described as a combination of those of the two previous groups. They progressed in harmonic awareness in the sequential way that was typical for the ‘melodically oriented’ students, but simultaneously worked on their knowledge of melodic scale degrees very similarly to the ‘rhythmically and texturally oriented’ students. As we combined melodic and harmonic viewpoints in the lessons, they seemed to manage well with

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<sup>93</sup>My present data cannot be considered a reliable source of the students’ elementary learning in music. I found it interesting, however, that the piano methods and materials, which students recalled as having belonged to their elementary tuition, suggested no straightforward connection to the students’ aural-skills performance. Rather, the students’ informal learning did: those students who recalled having played by ear, or having sung and played tunes as children, were also the ones who succeeded in traditional pitch tasks in aural skills, whereas those who recalled having started to learn music with notation had problems. Despite the aforementioned student’s Suzuki background, her descriptions did not give much evidence that she had played by ear very much on her own, in the sense of finding music on the keyboard outside the pieces that were specifically studied for piano lessons.

both challenges and made obvious progress. Initially, it appeared to be characteristic of both students that they did not have conscious means to orientate in tonality: they had not learned to recognise the tonic or to pay attention to different characteristics of melodic scale degrees. Such conscious means seemed to be very helpful for them. The elder student was used to relative solmisation from her previous studies, but did not initially appear to connect her use of relative solmisation with a very secure sense of tonality: for example, she might sing the tonic with a wrong solmisation. In all, the two students' challenges seemed to be quite strongly connected to a lack of analytical tools and conscious means to solve aural-skills tasks – but they made progress quickly once they had developed such tools.

The two other students were strongly oriented towards playing by ear. The elder student had left classically oriented music-school studies at the age of sixteen and since then had learned on his own by playing in bands, transcribing and arranging music and by working in different teaching fields. The younger one, in turn, described how she had never really learned to read scores fluently, and had, despite her continuous classical piano studies, mostly enjoyed playing music that she knew by ear, as well as improvising and composing her own music at the keyboard. Similarly to the 'melodically oriented' students, these two students started the course with a fluent skill of notating tonal and simple chromatic melodies, and had secure keyboard projection skills for tonal melodies. Nevertheless, they were not as comfortable and fluent in singing as the 'melodically oriented' students, and harmony often seemed to hold a priority over melody when they approached music. They also had less formal studies in aural skills and music theory behind them than the other students: they had only completed the 'music school level' before entering the Sibelius Academy (Appendix A/Aural-skills education in Finland).

Both the students who were fluent in playing by ear participated in the second course. I found them to be among the group's most secure participants in their harmonic skills, but they themselves brought up quite a lot of difficulties and uneasiness with notation and harmonic analysis, especially the scale-degree thinking that was used in the course. I encouraged the students to use the chord symbols that

were familiar to them from songbooks and to connect them with the scale-degree symbols that were introduced in the course. The shift into scale-degree thinking, however, seemed to be quite demanding to the students, who had learned to connect chord symbols with stylistic connotations and apparently could not easily transfer this knowledge into scale-degree symbols. As Janne, the elder of the two students, complained: “*I will certainly go through my Waterloos with the chord symbols and Roman degrees, those systems...*” (Learning journal, October 19, 1999.)

The two students differed from each other in that the elder student had consciously learned to make a distinction between his ability to orientate on the keyboard by ear, and notation or chord symbols – a working process that required some time and to which I will return in section 7.1 (case III). The younger student, on the contrary, had apparently not yet developed a corresponding familiarity with any type of harmonic symbols when she entered the course. During the course, however, she went through a learning process that was very similar to that of the ‘melodically oriented’ students. Her tendency to be initially confined to discrete pitches and to count them mechanically was very strong at the beginning, but this later gave way to a more global analysis of harmony.

The younger of the two students who played by ear recurrently expressed her major difficulties in sight reading, which she had felt ever since her early piano studies to the present day. She was well aware of her problematic habit of being confined to single pitches and even her need of laborious counting to grasp pitch distances – but nevertheless seemed to avoid anything that would direct her attention to units larger than single notes in reading situations. She described leaving rhythm and fingerings to later stages when trying to get through scores, and also disliked suggestions to start dictations from phrase-level units rather than discrete pitches. Towards the end of the course she progressed to more holistic thinking when notating music and realised that she was able to expect and recognise larger musical units and to connect them to notation. Her discovery that she could become conscious of metric groupings in music when notating was central, as well as her growing ability to consciously grasp chords as belonging to idiomatic musical patterns. Her problems in

sight reading piano scores, however, were not really worked out in the course, in which the reading of piano scores after all occupied a small amount of time.

The elder student finished the course after one term. With both students, I found that even though they had voiced positive comments on the use of keyboard in the course, their own strengths and fluency skills in playing by ear had not really been fully put to use during the courses.

### **6.1.5 Teacher's reflections: shared stories and divergent elements**

I formulated the previous descriptions so as to capture something of the process I experienced when working with the twelve students for the academic year. Together with the lessons, the interviews and learning journals enabled the students to share with me their learning and working processes from the first interviews and the aural-skills tasks, up to the end of the courses, including various challenges and learning experiences during the courses, and the concluding discussion and evaluation. When drafting the first versions of the descriptions, I gradually realised how I more or less consciously had in my mind a progressive story about each student: a story in which we would begin by finding out the students' needs, improve the students' skills through the lessons and homework, reach a rewarding result and reflect on the experience together.<sup>94</sup> With many students, my analysis of their data afterwards suggested to me that the student and I had also quite successfully created a shared story, in which the topics the students addressed in their journals corresponded to my perception of the students' challenges, and to the suggestions I had given the students on their practice. I had the strongest feeling of such convergence with the students whom I previously called 'melodically oriented', and the two students who worked both on melody and harmony. The students' interest in gradually expanding their harmonic vocabulary suited my plans for the course, and also seemed to be a convenient topic for verbal reflection in the journals. These students' clear, sequential journals had also enabled me to keep my story convergent with the students' focus during the courses. Despite some topics wherein I felt that I had not quite succeeded in conveying my ideas to the students, our stories had basically been interactive and convergent.

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<sup>94</sup>On stories as an analytical and pedagogical tool in this research, see section 5.2.4.

With some other students, I had already noticed during the courses that the students' reflections sometimes had a different focus from my concerns when working with them. The 'rhythmically and texturally oriented' students generally devoted lots of attention in their journals to the atmosphere in the courses and their feelings about learning. I was initially even slightly concerned, since I expected the students to be quite challenged by the course requirements, and yet their journals did not suggest that they had started to work on those challenges very quickly or consciously. Our cooperation was nevertheless successful; the students practised and proceeded, and finished the course with positive reflections on the successful completion of the course. Those students, in turn, who were the most fluent in playing by ear (section 6.1.3) were in my view also quite fluent in their harmonic skills, but were themselves concerned and uneasy about what I often thought of as minor details, such as labelling chords, or other theoretical conventions.

When I returned to analyse the data after the courses, I noticed in the students' journals and interviews an increasing number of elements that did not always support the storyline that I had had in mind while teaching. The 'rhythmically and texturally oriented' students in particular had expressed quite a lot of viewpoints, which could in fact have supported a slightly different design of course goals and requirements than those the students had to pursue this time. In particular, the students voiced quite a lot of doubtful views on the need to reach specific requirements in sight singing, pitch-location skills and harmonic analysis without the instrument. As I realised, I had been aware of such diverging thoughts, accepted them as experiences that were part of the students' learning processes, but had not stopped to consider changing our plans or goals. As a result, I found that our views had converged enough to enable a basically successful cooperation, but the students' stories about the courses were a little different from mine. In all, the 'rhythmically and texturally oriented' students' journals were less clearly organised into progressive stories than some other students, and especially the viewpoints that diverged from the course requirements mostly appeared as occasional ideas and side-tracks. If a student had a tendency towards writing a progressive story, it was about tackling the previously frightening aural-skills course and finding a possible positive approach to it – a highly important project, but which nevertheless did not appear to have a very tight connection to the specific contents of the present courses.

My observations on the students' and my more or less congruent stories led me to some reflections and further questions. On one hand, the students who now expressed doubts about the course requirements, such as fluent pitch-location skills, had not really reached a fluent stage in which they could have tangibly experienced how the new skill would change their musical awareness. On the other hand, ideas that diverged from the course requirements did not really have the opportunity to be carried into practice and developed into continuous stories, but needed to be left in the role of occasional thought or tangents. Quite obviously, some students also had strengths in areas such as score-mediated learning of music, which were not practised in such a systematic way that would have enabled progressive development and a progressive story.

In any case, I viewed my courses as exemplifying the idea of how the retelling of experiences can be used as an analytical and pedagogical tool (Pushor & Clandinin 2009, 293–296; see section 5.2.4). One of my tasks with the students who came with previous problematic experiences was to create an improved story, in which the students could now control their learning, recognised their strengths, and discovered how they could make progress. After the courses, however, I also continued the practice of retelling when I sought contrasting viewpoints to the ones that had dominated my thinking during the courses. As a result, I began to see a story about a course in which the students and I met each other, each with our different backgrounds, and where I appeared to be able to encounter some students' musicianship better than that of others.

## **6.2 Pedagogical issues**

The previous narrative descriptions of the different students' learning and working processes were a way for me to become more conscious of the pedagogical approach I had sought, and to notice when and how my work with the students was not congruent with the aims and values that I had been seeking. Quite clearly, the course programme and requirements resonated with some students' interests and backgrounds better than those of others. With all students, I realised that the courses had not always met the ideal of involving and supporting the students' aural awareness in a broad and rich way, and did not acknowledge the students' tacit, production-based and imprecise forms of musical awareness. To clarify such discrepancies between my intentions and



findings on what had happened in the courses, I compared the different students' data thematically and formulated a set of *pedagogical issues*, which all concerned problems in involving the students' musical awareness in the rich and holistic way I had hoped. Firstly, I discovered that my idea of employing and encouraging the students' **playing by ear** as an approach to aural-skills learning gained limited realisation in the courses. Secondly, I found it worthwhile to reflect critically on the position that I had given to **pitch-location skills** in the courses. Thirdly, the students' different experiences of **singing** suggested the importance of a broader variety of different forms of musical awareness than those that I had recognised when planning the courses.

When articulating the three pedagogical issues, I consciously sought to distance myself from the perspective on the students' data that had dominated my thinking during the courses. I paid special attention to the critical and divergent ideas, which had occasionally turned up in either the students' data or my own notes during the courses, but which we had not really carried into practice. I also realised that many of these ideas concerned the employment of the students' strengths and familiar habits of working. Apparently, the courses had been most successful in supporting the students to learn new approaches to music, but not as effective in enabling the students to use and expand those areas in which they were already strong. Having first concentrated on those processes in which the students learned to broaden their previous habits of action, I therefore paid special attention to each student's strongest and most familiar skills and also compared these findings with the other students' skills. This analysis also strengthened my awareness that some participants had developed skills through their broader engagement in music that reminded me of those that the other students practised in the courses – such as the aural analysis of harmony – but avoided some of the problems that the other students had faced in our classroom.

As my first pedagogical issue, I returned to the idea behind my course design that **playing by ear** can be used in pianists' aural-skills education for similar pedagogical functions, which dictation and various recognition tasks have served in traditional vocal-analytical aural-skills methods (see section 4.2.3).<sup>95</sup> While the project basically supported playing by ear, it also suggested the need to view the

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<sup>95</sup>For the terms playing by ear and aural imitation, see section 3.4 and Glossary.

possible uses and functions in an increasingly differentiated way. Playing by ear was usually represented as a phase in a series of musical activities from the same music example, and also became connected to some transcription of the music, harmonic recognition, or other work with notation or chord symbols. The students gave positive feedback on such work and found that it benefitted their analytical skills. Nevertheless, the findings also suggested to me that I needed to convey to the students more clearly how such uses only represented a particular, analytically oriented viewpoint to playing by ear. Contrary to my respect for playing by ear in its own right or my desire to encourage the students' grasp of musical phrases and other larger units in music, my analysis of the students' journals suggested that the students were often more concerned than satisfied regarding their solving of lesson tasks by ear without explicit concepts. Apparently, our aural transcription and harmonic analysis tasks had often implied to the students that the most detailed notated solution would be the ideal one. The experiences of those students who were most used to playing by ear were one valuable source of critical feedback (section 6.1.4), and I will continue to draw on them in Chapters 7 and 8. Even those students who were rather unaccustomed to playing by ear often expressed their uncertainty, since they found themselves orientating on the keyboard without an ability to label or analyse the played structures.

I also found in a couple of students' journals expectations regarding learning to play by ear that seemed to exceed the scope of the course. The students noted how a fluent knowledge of the keyboard would require regular, deliberate practice, and frequently regretted that their practice during present course was insufficient to allow tangible improvement. Regarding the scope of the courses and the amount of homework that could be reasonably expected there, I viewed the students' expectations and therefore their regrets on insufficient practice as being rather disproportionate. Even though I had sought to promote playing by ear, I had nevertheless conceived its role in the courses as a tool for developing the students' aural awareness of music – not a performing skill that the course would have improved in a large way.

With the second pedagogical issue, I also saw the need to reflect critically on the role we had given to the **pitch-location skills** during the courses, as commonly emphasised in aural-skills education: the labelling or notation of melody and

harmony, or the production of accurate pitches in sight-singing. The security of these skills was the central difference between the ‘melodically oriented’ and ‘rhythmically and texturally oriented’ students, whose different learning processes I described in sections 6.1.2 and 6.1.3. The analysis of the data therefore led me to ask if it was really justified to give pitch location such a decisive role, since this skill alone had shaped much of my work and interaction with the students throughout the entire courses. After all, my data also suggested that the students were drawing on global and imprecise types of aural awareness during their musical activities, which did not require similar pitch-location skills as traditional aural-skills tasks. When I reflected on my data afterwards, such types of awareness seemed to deserve more recognition in pianists’ aural-skills education than what I had given them: as possible intermediated stages in the students’ learning and even as goals.

In the courses, the aural imitation of music on the keyboard was an activity that engaged the students in the aural analysis of music, while reducing the demands of pitch location. When imitating, the students could use the instrument to recognise chords or melodic scale degrees. There were also situations during aural imitation in which students might complain of difficulty in recognising chords or following lower lines, but then suddenly find an accurate solution when I suggested them to “just try” or “guess” what would fit the situation on the instrument. In written tasks, the ‘rhythmically and texturally oriented’ students in particular seemed to notice dissonance-resolution patterns or cadential formulas before locating them in scale degrees. They also recalled how they had found it easiest to solve harmonic dictations in which the bass line had been given – a type of task that we did not practise during the courses, but which had been typical for many students’ previous studies. All these various tasks exemplify how the students might display their ability to recognise harmonic relationships, colours or gestures, before specific pitches or scale degrees.

Some of the rhythmically or texturally oriented students also compared the holistic type of musical anticipation that they felt when reading scores to the types of pitch awareness that were emphasised in the courses. While admitting that they would have hardly been able to sight sing very much of the score or aurally recognise the specific pitches of the music, they noted how they could still anticipate many of the music’s dimensions. As one of the students reflected:

*I realise how different it is if I need to analyse music by reading or by hearing. The written music, the notes, appear to me very clearly in all their abstractness, the structure and forms are clear. Such perception is holistic, whereas if I listen to music, I can grasp the general structure clearly, but to perceive a particular detail means having to leave the others aside. (Panu, learning journal, February 22, 2000.)*

Even the ‘melodically oriented’ students’ experiences in the courses led me to consider some rethinking of the role we had given to detailed pitch-locations skills. Despite the development of their harmonic awareness and their satisfaction with the progress, many of them still had quite a long phase in which they seemed to be confined to details and lost the sense of musically meaningful units. Many of those same students described how they had experienced difficulties in reading texturally complex notated music in theory courses and their piano study. (Section 6.1.2.) Yet the students with less secure pitch-location skills seemed to learn music with scores very fluently and seemed to have no problem in studying music through scores during theory courses. In fact, the course participants’ self-evaluation of their ability to imagine music when reading scores and their success in melodic aural-skills tasks seemed to be almost reversely related: the ‘melodically oriented’ students who succeeded in traditional aural-skills task most often described problems with score reading. When only listening and discussing music or playing pieces they knew well, these students did not demonstrate any problem in their grasp of musically meaningful units. Nevertheless, their security in detailed melodic and pitch-location skills seemed to involve the threat that their attention was directed at a too detailed level of musical problem-solving, both when addressing tasks that involved notation and especially in tasks that required pitch location.<sup>96</sup>

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<sup>96</sup>Since the score-mediated learning of piano music was not a central part of the course programme, my data on this issue is mainly based on the students’ first-person views. This evidently leaves some open questions concerning the nature of the students’ ‘inner hearing’ in connection to their score-mediated learning. One possible explanation is that the students whose pitch-location skills were stronger were also more conscious and self-critical about their ‘inner hearing’ of music while reading scores. One of the rhythmically and texturally oriented students also reflected at length on how he experienced the process of grasping the design and character of pieces through scores as a highly demanding – an issue which seemed to be related to his search for personal and yet stylistically sensitive expression.

In the third pedagogical issue, **singing** was also a topic in which I understood the need for a broad view of the various types of aural awareness that were central to the students. As illustrated in 6.1, the students' overall relationship to aural-skills learning was very much connected to how comfortable they were with singing. Yet, their interviews and journals suggested that singing was involved in their broader engagement in music in much more diverse ways than the particular uses of singing in traditional aural-skills lessons. When asked, all students admitted that they used singing in connection to their piano practice. Even two of the 'rhythmically and texturally oriented' students who had the most problems with singing during the courses brought up the positive value that they felt singing of melodic phrases and polyphonic lines brought to their piano practice. The most important functions of singing in their pianistic work, however, did not seem to be dependent on the ability to sight-sing correctly, or even to sing or imagine music at the correct pitch. Rather, the voice was a tool for feeling melodic phrases or for strengthening the feeling of polyphonic lines and thus give them individual characteristics.

Even if many students gave positive feedback on group singing in the courses, some students also brought up how the melodically demanding songs and sight-singing requirements easily made their singing in the aural-skills classroom different from what they would do in other contexts. Several students noted how it was very easy in the aural-skills classroom to adopt strategies that did not actually correspond to those they would use in other contexts. As one of the piano majors reflected:

*The starting point is controversial: for example in sight singing, one only thinks about the pitches, whereas in playing, you would think about phrases, nuances etc. (Ulla, learning journal, October 26, 1999.)*

Several students brought up how choral singing had offered them a socially relaxing atmosphere and also the chance to learn sight singing in the presence of helpful elements such as partially known repertory. For example, a conversation with Kaisa, an experienced choral singer, brought up how folk-song arrangements enabled the singers to rely on harmonic expectations derived from their previous knowledge of the melody, even though they were singing a basically unknown choral part. As she pointed out, she often found it difficult to sight-sing the classical canons that were

used in our course, whereas she had experienced no special problems with sight-singing in a choir:

*Kaisa: I find it so easy to sight-sing in the choir, but it looks like it is difficult now, it is so different. [...]*

*Lotta: So, in the canon, you don't have the harmony, like it is difficult to sense it?*

*Kaisa: Yes, and if you sing a section alone, it does not even exist*

*Lotta: What about, if you have a choral part, and you practise it, how does it go, do you see the whole harmony there...*

*Kaisa: Yes, that helps a lot. I see it. And then, if I know it is a familiar piece, I can hear in my mind approximately how the melody goes, and relate my part to it. I know when it gets closer and further and so on...(Middle interview.)*

The type of harmonic anticipation discussed here was one more example of types of pitch awareness that did not require the kind of pitch-location commonly practised in dictations and sight-singing tasks. Instead, it is possible to say that such choral situations involve a type of pitch awareness that is dependent upon contextual clues, such as other vocal parts that are already familiar, while the musician's task is to adapt to this contextual information rather than act alone.

To draw together the three previous pedagogical issues, the data brought my attention to various types of musical awareness that obviously occupied a central place in many students' musicianship and appeared worthy of encouragement and development, but which we did not attend to systematically in the courses. Playing by ear obviously had much richer dimensions than what the students had the opportunity to develop. The students' musical activities also seemed to involve types of global and gestural pitch awareness, which sometimes even appeared to conflict with high demands on focused and precise pitch-location skills. Even singing seemed to contribute to pianists' aural awareness of music in ways that could not be reduced to its traditional uses in sight singing.

The various forms of musical awareness that I have discussed here are of course not unknown to musicians, but my data still suggested to me that their role in pianists' aural awareness could be recognised more than what we had done in the courses.

When I analysed my data, the limited attention to global and imprecise types of aural awareness during the courses sometimes seemed to be connected to my hastily proceeding to notation or to detailed harmonic analysis. In many situations, the students could have been better encouraged to trust and cultivate the more global directions through a better design of classroom time, or by explicit discussion that would have recognised the value of global thinking. Nevertheless, my decision to stick to the traditional course requirements, which emphasised pitch-location and notation skills with the instrument, had clearly limited our possibilities to cultivate other forms of musical awareness. I will therefore return to the role of the course requirements, and suggest some alternative ways of setting goals for the students' work, in Chapter 9.

### **6.3 Aural skills: conception in practice**

My pedagogical ideal behind the aural-skills courses was that the students would also have the opportunity to develop their awareness of the skills and contents they were learning and receive support for their independence as learners. As the previous sections illustrate, the courses and the analysis of the data led even myself to see the skills in my subject in an increasingly complex and differentiated light. Indeed, the very aim of educational action research is that both teachers and students will develop their understanding of the educational processes in which they are participating, reflect on them and develop them. The students' and my reflective processes, however, were not identical, but rather proceeded in a kind of polyphony. As the issues of playing by ear demonstrated, I sometimes realised the need to convey ideas to the students that I thought I was already expressing in my work. Sometimes, in turn, I realised when analysing my data that some students had been able to spell out themes and issues much earlier than I had discovered the importance of them in our work.

After the courses, I also analysed the data from the viewpoint of how the students discussed the aims and content of aural-skills education and how the courses seemed to succeed in encouraging their reflective and self-directed learning. Besides comments and reflections that directly addressed the aural-skills courses or the skills to be learned there, I studied how the students organised and evaluated their work, what kinds of criteria they used to judge and monitor their learning, and how and

when they referred to situations and tasks outside the aural-skills classroom when writing their journals in the lessons. I also paid attention to comments and reflections that suggested a disconnection between the aural-skills classroom and the students' broader musicianship, such as the students' reference to rules and criteria that seemed to apply only in the classroom. While my sources in this analysis were verbal texts, I interpreted them in light of my knowledge of what had happened in our lessons and what the students had described regarding their broader engagement in music (see section 5.3). Quite obviously, what was included in aural skills and valued in them was communicated to the students through what was done musically, even more than what was explicitly discussed.

When the students directly discussed the meaningfulness of aural-skills education and described their more and less meaningful experiences, they frequently emphasised how important it was that the attention was focused on means and processes, rather than outcomes of learning. While this prerequisite is certainly not novel or surprising, the data alerted me to many conditions that easily seemed to threaten it in aural-skills education. Especially the students with problematic previous experiences retrospectively noted how they had often felt that they were totally ignorant of the means by which to solve tasks such as dictations, which some of their peers just seemed to master without difficulty. During the courses, these students' progress was often accompanied by reflections on how they could attune and organise their perception through action, for example transpose harmonic patterns and thereby learn to grasp similar structures by listening. Provided that perceptual skills involve lots of processes that cannot be controlled and shaped at will (see sections 3.1–3.2), the need to turn apparently abstract perceptual goals into action plans could indeed be considered a central principle of aural-skills learning, which many students needed to personally experience before they made progress. The interviews also suggested that the aural-skills tests – which in Finland typically belong to course assessment or the application or group placement processes – had a powerful role in communicating to the students that aural skills were all about what kind of knowledge was taken seriously in formal education. Many students had also experienced that the tests had strongly influenced the contents of aural-skills courses in music schools:

*Like, each lesson was like an exam, divided into cadences, melody,*



*rhythm. Somehow, it might be my own fault too, but you did not connect them in any way. (Veera, final interview.)*

Concerning the practitioner-research courses, the data also suggested to me that even when the students conceived the learning processes of aural skills as active and personal, they often referred to the contents of the courses in more static and objectivist terms than what I would have desired. Particularly thought-awakening for me was to notice how frequently many students referred to the contents that we had studied or solutions to the lesson task with comments such as “*Now I understand it*” or “*I managed to get it*”. In part, such short references were likely to be connected to the fact that our activities had mainly occurred through music and not through words, making it not so easy for the students to verbalise their experiences. I also found, however, that such journal entries implied that the students in those moments mainly attended to the solving of the task correctly and assumed the contents and solutions to be in no need of special explanation. One reason that seemed to contribute to a somewhat passive or reproductive stance was several students’ concern about understanding the theoretical concepts we used, and being able to follow the group – which was visible in several students’ journals at the beginning:

*In the analysis phase, I got lost again, due to the [...] chord inversions, but... they were reviewed!! Yippee!! I managed to make notes and think about them. (Kaisa, learning journal, September 21, 1999.)*

Despite the previously noted problems with encouraging the students to approach the course contents in an active and self-directed way, the data also brought many examples of situations and topics in which the students had, through personal experience, discovered what they needed to do to learn aural skills, and how such work would benefit their musicianship as instrumentalists. As I drew together examples in which the students had experienced meaningful aural-skills learning and reflected on it, a frequently recurring theme in these reflections was practice that varies and explores, rather than repeats, certain musical materials and structures. On various occasions, the students returned to discuss how important it was that they had a chance to study various musical structures, such as harmonic progressions, by varying them and developing them in a range of musical solutions, instead of a single

one. For many students, tasks that involved some kind of variation of a given material were a key distinguishing feature between the study of aural skills, and the work that they found characteristic to their piano study. Even if the students used different expressions, I chose to refer to such practice, frequently mentioned in the different students' data, as *flexible practice*. As Elias, one of the performing majors described his discovery, which had already occurred before the course, but which had motivated him to sign up for the course:

*[A]t some point, I somehow understood something as a sequence. Of course, I kind of knew what sequences were, but not what kinds of sequences there are overall. And then you actually don't need much more than having gone through something like that and found that it sounds great, and then you come across a piece, even if you do not know it, and you recognise this familiar thing. (Elias, final interview.)*

As many students noted, the practice of alternative solutions to a given musical situation was important for tasks that required adjustability and quick reaction. For example, they noted that the practice of harmonic patterns on the keyboard was helpful if they needed to harmonise and accompany music by ear. Even more, however, the students discussed the benefit of such practice to their structural awareness of music: particular chord progressions gained a new level of meaning as a result of the musician's practical awareness of what could be in the phrase in place of it. The students found how they could by transposition, figuration and small-scale improvisation gain an insight into how the musical result changes as a result of their choices, and how the different choices were related to one another.

While the study of harmony provided the most frequently discussed examples of flexible practice, the similar idea of developing generic awareness of musical structures by varying materials and trying different solutions also came up in connection to melody. Instead of just travelling through the keyboard along previously learned paths, the students emphasised how valuable it was to be able to choose any path and to anticipate how it would sound – or vice versa: “*Just like – being able to find one's musical thoughts on the keyboard, to translate one's musical images into sound*” (Panu, learning journal, October 19, 1999).

As I realised when drawing together such reflections that related to flexible rather than repetitive practice, the students were actually discussing a very basic idea behind aural-skills pedagogy: metric, harmonic or rhythmic units were extracted from music, recognised and practised by applying them to new musical situations. As I previously described (section 3.4), a similar decontextualisation and recontextualisation process can also be found in many traditional aural-skills methods, with the focus on pitch. Melodies are practised with some pitch nomenclature, and the pitches are then decontextualised and recontextualised so that the students will generalise their awareness of the pitch system. Yet the data suggested that it was essential to formulate and demonstrate the principle in a practical way so that students were able to connect their previous skills and broader engagement in music. In other words, they needed to discover how aural-skills learning helped them to broaden the awareness of musical materials that they already possessed.

Indeed, the idea of flexible practice captures the pedagogically important principle that new learning needs to be rooted in the students' existing skills: there must be some existing skill before it can be made flexible. The lack of such a connection seemed to be the very problem behind many students' previous problematic experiences with aural-skills learning: the typical activities of aural-skills education had involved too many unfamiliar elements at a time, which had prevented the students from recognising a connection with their previous skills. The keyboard activities, however, enabled them to practise their aural skills, for example develop their pitch location, in a way that also suggested connections to their familiar habits.

Of course, the aural-skills classroom is not the only place in which the students were engaged in flexible practice. Especially the students who were active in popular music or early music brought up how their instrumental practice contained very similar practice, in which they varied harmonic and voice-leading patterns and applied them to new musical contexts. In connection to classical piano study, the work with polyphony and texture was the most frequent example in which the students described their practice of various solutions. Indeed, the students' description of how they sought to vary these parameters and to develop their generic skill of controlling sound through their instrument can also be regarded as one type of flexible practice – which only focused on musical parameters that were not traditionally the main focus of aural-skills education.

The students' discussions of flexible practice can, in fact, also be connected to the Deweyan notions of habits as the basis of human knowledge. While emphasising this idea, Dewey also makes a distinction between habits that are narrow and restricted, and those that are broad, self-correcting, and fruitful for further development (Dewey MW 9, 53–54; 71). The students' discussions on the possibilities of what aural skills study could give them actually came close to the Deweyan ideal of flexible, self-corrective action. I therefore found the ideal of flexibility as providing an example of how to formulate the aims and essential processes of aural-skills learning, in a way that was both connected to the students' personal experiences and yet congruent with my theoretical conception of aural-skills learning.

I will continue in the next chapter (7) with how the students also discussed spending time on varying musical patterns and broadening their awareness of possible solutions in connection to larger scale musical values such as patient practice, in which the musician does not immediately accept the quickest or easiest solutions. Spending time and effort on musical exploration and generic awareness of various musical dimensions were aspects that the students recognised as being very important, but which easily suffered from tight timetables and pressures to produce results in a limited time. I will also return to some more results concerning the students' reflection on their learning in Chapter 9 and suggest how a more open and adaptive design of course contents could help to advance the students' active approach to the course subjects and their self-directed learning.

## SUMMARY

The students' skills and learning processes in the aural-skills courses were very different and seemed to reflect the students' broader engagement in music. Five students whom I called 'melodically oriented' had a background that supported singing and learning melodies by ear, and mostly worked on their harmonic awareness. Three 'rhythmically and texturally oriented' students had from an early age studied complex piano repertory through scores and made the most progress in their melodic skills. Four 'students with mixed profiles' had characteristics from both groups. The participants gave positive feedback on the activities and pedagogical approaches and especially the keyboard work, but I found the courses to be more compatible with the 'melodically oriented' students' backgrounds and needs than

other students'. Generally, the results suggested to me that playing by ear would have deserved a more independent role in the courses, while pitch-location skills seemed to have gained undue emphasis, and singing remained in a somewhat narrow and technical role compared to its uses in the students' broader engagement in music. The results also suggested the importance of discussing the nature of aural-skills learning with the students and guiding them to translate perceptual challenges into action plans.

## **7 Student reflections on musicianship and aural skills**

Besides working with my students during the aural-skills courses and gathering data there, I interviewed them on their broader engagement in music: their studies and activities as pianists and musicians, habits of learning and working, and interests regarding how to develop as musicians (Appendix F/Interview themes). The first interviews were particularly important for my becoming acquainted with the students' broader musicianship. Later, the students returned to their pianistic work and broader musicianship to varying degrees in the second and third interviews, journals and classroom discussions.

I found those interviews that had illuminated the students' broader engagement in music to be very valuable for our working relationship in the aural-skills courses. I felt when teaching the courses, however, that we were not able to fully employ the ideas and insights that the students had brought up in connection to their pianistic work. When I returned to the data some time after finishing the courses, I found it interesting to analyse anew the students' reflections, which were not strictly framed by the tasks and requirements of the aural-skills courses. I even discovered that they provided some clues to the problems and shortcomings I had found during the courses. As already noted (section 6.2), I had found that the students' imprecise and productional types of musical awareness were not fully employed in the courses. The courses also left me with the feeling that some students had been cast unnecessarily far from their familiar habits of action. I therefore decided to devote some special attention to how the students had described their work in their most familiar activities and contexts, in which they were experienced and fluent, and in which they also appeared to use their aural awareness in less technically focused ways than in formal aural-skills education.

In this chapter, I will first present three student cases (7.1) to illustrate how the different students had quite a variety of pianistic backgrounds, interests and needs for aural awareness. In section 7.2, I will describe how the courses raised discussion on various models of pianistic work, and how the students brought up needs and interests that were connected to both score-mediated learning, and improvisatory and aurally-based types of music making. In 7.3, I will compare the students' discussions about

their pianistic work and broader engagement in music to the skills and contents studied in the aural-skills courses. In particular, I will draw attention to processes and skills that did not belong to the conventional realm of aural-skills education, but which also seemed to be relevant for the students' perceptual and analytical skills. I will conclude the chapter with some comparisons to previous literature, as well as preliminary implications to be further discussed in the following chapters (7.4). Appendix H (Coding categories) provides more detailed information on how the findings that I describe in this chapter are supported by the data.

### **7.1 Three student cases**

To illustrate how the students' interviews complemented the data gathered from the aural-skills course, and sometimes cast critical light on the learning processes there, I chose to present three student cases here. One of the students participated in the first course (Elias, case I), and two in the second one (Veera and Janne, cases II and III). Elias and Janne were exceptionally experienced as musicians in light of participation in this aural skills course, which was usually attended by first-year students. Elias had postponed his compulsory aural skills studies to the very end of his master's degree, and Janne had worked as a freelance musician, taught music, and had acquired another occupation before entering the Sibelius Academy.<sup>97</sup> For this research, Elias and Janne may be seen as very useful *critical cases* due to their experience, rich and articulate speech, and also a somewhat reserved approach to aural-skills study. They were very critical about their previous aural-skills studies, and came to the present courses with quite well-rounded expectations, which were connected to their pianistic work. Veera, in turn, represents a somewhat opposite case, since she was a first-year student, but was already advanced in her formal studies of aural skills.

From my viewpoint, the three students were rather good at the skills expected in the courses, but often spoke in a rather self-critical manner. I found this slight discrepancy worthy of some reflection too, as it suggested that the students had

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<sup>97</sup>Although aural skills presently belong to the bachelor's degree at the Sibelius Academy, during my data-gathering the students were directly accepted to an undivided master's degree and could therefore postpone some of the compulsory theoretical courses until very late.

interests and criteria for their musical development beyond the official course requirements.

### 7.1.1 Case I

Elias, a piano major, participated in the first course, while approaching the end of his master's studies. His work and aims clearly concentrated on classical concert performance: the learning of common-practice piano repertory and the preparation for concerts and competitions. He described himself as previously rather indifferent to theoretical studies in music – even though he had had no special difficulties in them. Recently, however, he had become fascinated by the study of tonal harmony. The motivation had apparently come from several simultaneous sources. He mentioned a course in music theory, in which the teacher had suggested connections between tonal harmony and Lied texts. The associations with textual and dramatic expression had caught his interest and had also given him ideas on the expressive use of harmony in music other than vocal. Simultaneously, he had admired the technical security of some of his fellow students, and realised how they mastered a repertory of tonal patterns, which they could transpose to different keys and change to different textures.

*So, I started to view theory and aural skills as being connected to this kind of tonal grammar. And they started to seem very beautiful. And I got the idea that ok, if I really learned this properly, how much more I would get out of tonal music. [...] So, within the last half a year, I got interested in practising more [tonal progressions on the keyboard]. For example in the Hungarian Rhapsodies by Liszt, there is a set of basic patterns, which just go in different keys. If I just learned them in different keys, that would enormously speed up the learning process.*

Elias described himself as a poor sight reader, and also as a 'melodic type', who could easily find melodies on the keyboard, but felt clumsy and insecure with harmony and complex textures, either when reading music or trying to orientate by ear. His desire was to improve these skills, which he also connected to a pursuit of stylistic awareness in music. His aims, as they seemed to me, were rather high in comparison to the material we used in the course. He often complained about his slowness in



classroom tasks, but was from my perspective among the most fluent students in the group.<sup>98</sup>

Elias had a special interest in recordings. As he described, until a few years ago he had spent hours a day listening to recordings, mostly classical piano music – often with friends who shared a similar interest. He kept referring in his interviews to recordings by famous pianists whom he admired. He admitted that most of all he respected a pianist's sense of nuances, and the ability to shape them into what he called dramaturgy: a clear direction and sense of process. His recent interest in harmony, in turn, had become a part of his general pursuit of stylistic sensitivity and historical awareness. As he felt, it was not as popular among piano students as he would have wished; that they would pursue historical or stylistic awareness of the music they played, and that they would be familiar with historical recordings, or broader cultural history such as connections between music and literature.

Many of Elias' views on pianistically relevant aural-skills learning were already present in his first interview. He voiced positive comments on the work in the course, but was also absent from quite many lessons, and admitted afterwards how the year had been somewhat busy for him and had not allowed him to work as he would have wished. He also felt that the course had really only gained momentum late in the autumn – the beginning had been rather slow for him. As I found, many of the key elements in his learning process actually seemed to have happened before the course. He had already found a personally interesting goal before the course, as well as ideas on how to work towards it. During the course, he was polite but somewhat selective. Besides harmonic work, he managed the course activities so as to pass the course, but admitted that the other areas were not of special interest to him. He had also only recently completed his courses in music theory, and some of those through independent study. As he admitted, he mostly found it comfortable to learn on his own – and indeed seemed to have a good command of the theory textbooks he had used. Regarding this course, in the last interview he had some suggestions for further development: the course could further involve music listening, analytical discussion,

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<sup>98</sup>When analysing the data from the aural skills course, I grouped Elias under the 'melodically oriented' student category. Already among the strongest at the beginning, he nevertheless did not demonstrate an equally clear learning process to some of the other students in the group.

and especially the comparison of different performances and thereby expressive solutions for the same pieces.

### **7.1.2 Case II**

Veera was a first-year piano major, who had come directly to the Sibelius Academy upon finishing school. She had actually passed the course already in the placement test, and could have proceeded to the next level, but after hearing about the special group asked for permission to participate. As she described, she had found her previous theoretical studies of music rather disconnected from her piano playing. She had passed them without difficulty, "by studying for the exam" as she said, but believed that her structural and harmonic awareness of music was weak in practice. During the course, she commented very positively on all keyboard work, the use of authentic music examples, and the tasks connected to the students' piano repertory. While I found her to be among the most fluent in the group – quite natural since she had already passed the course – she was rather self-critical. She frequently expressed that she felt she still had a lot to learn regarding her command of harmony in connection to the keyboard, and in the context of authentic compositions.

Veera remarked that she had got the idea of applying for piano performance rather late, a couple of years earlier. While still in upper secondary school – one with a music specialisation – she had engaged in a broad range of musical activities. She mentioned singing as being very important to her: she had studied popular and folk song, and liked the social atmosphere of music-making in school choirs and bands. As a pianist, she had studied 'free piano' in music school for two years, and had a basic skill of playing from chord symbols. She felt, however, that such experience had not really changed anything in her practice of classical piano repertory, which she wished to develop. She especially hoped to strengthen her ability to find harmonic patterns on the keyboard and to transpose them, as well as the ability to grasp the harmonic structure of compositions by reading. As she expected, such learning would also support her memorisation of music – which she managed, but which in her experience overly preoccupied her mind in performance. She also thought it very positive that the course involved playing by ear and improvisation tasks – even though she felt very insecure in them.

Having now entered higher education as a piano major, Veera believed that she had a great challenge to develop her knowledge of piano repertory, and to become comfortable with various musical styles. For example, she felt music of the classical period somehow difficult to approach at the time. She wished to develop her practice in an increasingly conscious and organised direction – without losing the sense of freedom and enjoyment that she had found important in her previously somewhat unprofessional approach to music. With her new teacher in the current year, she found that the work during piano lessons very much concerned the bringing out of various layers and polyphonic structures, as well as the shaping of large-scale form in music – a kind of structural awareness, though not so much put into words. She was inclined to sing, and generally participate with her body during musical phrases as she practised. Her teacher had sometimes even pointed out that she should also remember to take a listener’s perspective and not let her singing along with the melodic lines push aside a holistic listening to the musical texture.

In section 6.1, I grouped Veera under the category of ‘melodically oriented’ students. She gave much positive feedback on the keyboard work and felt herself progressing in harmonic awareness. She also found during the course that the keyboard work helped her to recognise previously unnoticed similarities between harmonic patterns that she had encountered in various musical genres: music she had studied in keyboard harmony lessons through chord symbols, and classical repertory. Her mastery of the minimum requirements of the course from the very beginning, though, made her learning process less dramatic and visible than some of the other students, whose learning I previously described in more detail (6.1.1).

In her self-critical tone, Veera reflected how there was so much a musician should know. She was of the opinion that much of her previous music learning was not so conscious and disciplined– including aural skills and music theory. Her ideas on improving her harmonic awareness had also been influenced by a friend who composed, and seemed to have a much better grasp of music. She believed, though, that she had not been given very many tools to improve her harmonic awareness at the piano. Neither had she found the stylistic awareness of music very well attended to in her education generally. Simultaneously with the aural skills course, she was also participating in a music-theory course that also incorporated keyboard work – very

useful, as she discovered.<sup>99</sup> In a very polite tone, she also expressed some criticism of the rather uncreative type of elementary piano pedagogy, which she had experienced as prevalent during her music school studies. In her view, teachers should also encourage the students' own exploration of musical materials, especially through improvisation, and not work solely with pieces that are too complex and elaborate.

Several times, Veera came to reflect on what kind of knowledge would actually help her towards an improved stylistic awareness of music. In theory lessons, she had found it very interesting when the teacher had pointed at the composer's design of tonal regions – but also saw that by being able only to label them she would not improve her practise very much. The question of verbal versus production-based knowledge, in fact, reappeared several times in her interviews, and also in connection to her comments on playing by ear in the course. She was among those students who were often concerned with not being able to label the structures they played (section 6.2).

At the end of the course, Veera expressed her satisfaction with having learned many tools for working with harmony. In her view, improving one's musical skills and awareness in the direction she desired was a long-term task, and could not be fulfilled in a single course, but the experimentation and ideas had been encouraging.

### **7.1.3 Case III**

Janne was also among those students who were older than average; he had started his music-education studies after studying and working in another field, but had also various types of work experience in music. He had studied the piano in a music school until the age of sixteen, then left the music school, played in popular music bands, and developed his skills independently for many years. His descriptions exemplified a very different general approach to pianistic practice from the other students, due to his strong focus on popular music and learning by ear – which sometimes led the group

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<sup>99</sup>Three of my students also participated in 'Music theory 2' with a special keyboard orientation, in which the study of voice leading and small-scale musical forms were approached through keyboard exercises involving improvisation. The course was taught by a colleague of mine, with whom we sometimes briefly exchanged experiences, although we had planned and started our courses independently from each other. The teacher of the theory course, however, soon moved to another job, cutting our cooperation rather short.

into discussions and comparisons between such different approaches to the instrument. As he described, a central way of learning was to learn to play by ear music that he liked, often playing along with recordings. The transcription of music from recordings was also central for him: sometimes as a way of earning some money, but also very important for his own development interests. He had worked as a music teacher in schools, and finally decided to apply for the study programme in music education.

When learning new pieces, Janne would often first play them along with recordings. He described – and also demonstrated – how he would let his hands ‘find their way’ on the keyboard, which was a way of instrumental practice, but also a way to become conscious of the harmonic vocabulary in the music he was learning. He described how he made some effort to continually expand his command of stylistic keyboard patterns: once he had found interesting solutions in a particular key, he would transpose the voice-leading patterns to other keys. He admitted, though, that different keys tended to retain their distinct feelings: *“different keys, they lead you to find different things, they just sound different in the various keys, someone might hear them as colours, or shades, and so.”* If needed, he could then use the keyboard to become conscious of the chords and voice leadings of the music under study, and translate them into standard notation and chord symbols.

An illuminating demonstration of Janne’s way of analysing harmony occurred in the very first interview, in which I gave him an extract of a Mozart string quartet to imitate on the piano. The encounter with an unfamiliar musical style caused a situation, which, while amusing to both of us, also helped elucidate the nature of his chord recognition abilities. He quite instinctively harmonised the Mozart excerpt with many seventh chords, recognised that they did not really fit Mozart’s style, and noted how his hands found patterns that would have been expected in his more familiar repertory.

Besides his learning from recordings, Janne described his teachers in the music education programme as being important models, whose playing he could use as a source of musical ideas:

*The different teachers have different styles of playing; they are different musicians. They had their different idols, which one can hear in their*

*playing. Someone has listened to a particular kind of music, and another one has specialised in something else. And yet, they had processed it all to fit themselves, you can directly enjoy the fruit, and pick up things.*

Janne mostly worked with music that was notated with lead sheet notation. He described how he would work out the keyboard performance according to the musical style, as well as conditions such as whether he was playing alone or as a part of a band. The reharmonisation of phrases, the design of appropriate voice leadings, textures, and ‘voicings’, were a natural part of the practice.

The aural transcription of music into notation appeared in Janne’s descriptions as an activity that required some time and effort, but which he very much enjoyed. He described very positively how practical circumstances often gave him a natural chance to expand his skill of working without instruments. At home, he only had the guitar, and while on holidays or travelling he would do transcriptions in the absence of any instrument:

*All that – as you do so much of such work, then you can just check with a tuning fork, recall the melody, and write it down – say, in a bus. [...] Away from the working environment, on summer holidays or whatever, it is very therapeutic, for example, to be without any instruments. One’s preconscious mind works hard, and so on.*

During his attendance in the first half of the course, Janne’s experience in the aural transcription made him among the most fluent participants when analysing harmony by ear. He was self-critical, though, and often expressed difficulties with the uses of notation or chord symbols in the course. He felt some difficulties with connecting his knowledge of harmony, which he had previously learned through songbook chord symbols, to the scale-degree system used on the course. While he produced correct answers to classroom tasks, the symbols seemed to be lacking the sense of familiarity that he had learned to expect as a musician. He also questioned my suggestions not to use the keyboard with sight-singing or aural transcription tasks: he had learned to develop his aural awareness by using the means available, whereas making his work more difficult just for the sake of practice appeared artificial to him. He also noted some difficulty in the singing tasks of the aural-skills lessons, although he had quite a

lot of experience in choirs and with school work and to even appeared use singing or whistling as a tool to solve some transcription tasks.

Janne left the group in January – after participating in half of the course and in two interviews. Apparently, the course had not been quite optimal for his interests. Although he came to the course expressing his interest in expanding his knowledge of classical repertory and musical idioms, I felt that the gradual progressing through the rudiments of tonal harmony in the courses had not been very successful in opening this genre to him and feeding his musical interests. His data, in any case, provided a very valuable example of an approach to aural-skills learning that was connected musician's practical tasks, and the dialogue between such experience and the tasks that I had designed for the course.

## **7.2 Pianistic activities and skills**

For the courses, I had invited students who had the piano as their major instrument. As the three cases exemplify, the students' backgrounds and interests were otherwise very different, and also their ages varied. I expected that students who had reached higher education would have had enough experience with their major instrument to ensure that it would have played a central role in their aural awareness of music, and also for their identity as musicians. I had also designed the course so as to encourage the students to use their instrument in different ways and to suggest to all of them some new approaches to the instrument. We used mainly classical repertory, but approached it through activities that were not a regular part of the students' classical piano studies. The students imitated pieces by ear, extracted from them harmonic patterns to be transposed and figured, notated melodies and bass lines and analysed the harmony through listening. The piano was also used for the harmonisation of melodies and improvisation tasks on given harmonic patterns, or sometimes based on scales. In the questionnaire I had sent to the students before the first interview, I had also asked about their habits of practice and approaches to their instrument, including playing by ear and improvisation (Appendix E/Initial questionnaire).

The questionnaire, the aural-skills lessons, and encounters between the different participants quite naturally led the students to discuss how the piano could be used in very different ways in musicians' work, and to reflect upon their personal needs and interests. Naturally, there was a difference between the future prospects of the

performance majors and music education majors. Central topics in the performance majors' interviews were the working processes with extensive pieces, preparation for concerts and choice of repertory, while the music education majors' future working contexts were likely to be diverse and even involve various possibilities for using the piano. Besides their classical piano studies and teaching of piano students, the latter would likely use their pianistic skills in bands, as accompanists and in music transcription and improvisation. Their degree studies also involved a strong component of popular music (Appendix B/Music education and music performance programmes).<sup>100</sup> The students' interests, nevertheless, could not be strictly divided according to the degree programme, and I thought it useful that students with different orientations had the opportunity to share experiences. Piano teaching was the common ground for all the students: most of the students in both programmes had some piano students.

I will in the following section briefly describe how the students brought up their needs for aural awareness, which revealed that they were aware of different uses for the piano in the surrounding musical community. They had all attended music schools as children and during their school years and had become used to the learning of classical piano repertory from scores, which continued to be the most familiar type of pianistic work for the majority of the group (7.2.1). The idea that a pianist could also find music by ear on the keyboard, or be able to produce harmonic patterns and adapt them to the musical style, also led the students to discuss the type of keyboard work that is typical in popular music styles. Because of the one harpsichord major in the group, the discussions also came to refer to keyboard players' skills in early music. Due to some similarities between keyboardists' work in popular music genres and in early music, I chose to discuss these genres together in the following text, under the

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<sup>100</sup>My decision to study connections between aural-skills learning and the students' pianistic musicianship means that even with the music education majors, my focus was on their activities and interests in connection to the piano. Having volunteered for the pianists' course, the students' seemed to find it natural and positive that we emphasised the pianistic side of their musicianship in the interviews and in the courses. Its needs to be remembered, however, that this means taking a consciously limited view of the music-education majors' professional needs, since their future professional tasks may be broad, and involve a variety of needs for aural awareness – even those not very connected to pianistic work.



title “Learning music with shorthand notations and improvisatory practice” (7.2.2). Although the students basically knew that the ability to use the instrument in aurally based and improvisatory ways could also support the study of classical repertory, in practice these two forms of keyboard work seemed to be available to the students quite separately and to involve different social communities.

### **7.2.1 Score-mediated learning: towards personal musicianship**

All of the participants had studied the piano in music schools, most of them until their higher education studies. Fundamentally, they had all learned how to study classical repertory with scores, and nine of them continued their classical piano lessons during the research.<sup>101</sup> As they discussed their score-mediated learning, their talk was therefore characterised by the search for an increasingly personal and conscious approach to their familiar conventions of learning. Several students described themselves as having re-evaluated their previous habits of learning at some stage of their studies, often in connection to their entrance to higher education. Many of them now viewed the habits of practice that had dominated their learning in their school years as rather unreflective and shallow, and had given way to an increasingly conscious pursuit of qualities that the students believed belonged to skilful and professional musicianship. Personal, expressive, stylistically sensitive and analytically informed were frequently used characterisations.

Two performing majors described the sight-reading of music as a central and regular activity, which they used to search for interesting repertory, and which they had also developed through occasional tasks as accompanists. Otherwise, the students mostly discussed the score-mediated study of music that was often already rather familiar to them by ear. As many of them noted, quite a large part of their time was devoted to repertory they knew from recordings or performances in concerts or among students. Even with previously unknown works, the initial sight reading of the music was only the beginning of the learning process with scores.

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<sup>101</sup>Of the three students not attending regular piano lessons during the research, two were music-education majors who were currently concentrating on other subjects, and one a performance major who had decided to work for a period without a teacher. Among the participants, there was only one (Janne, case III in 7.1.3) whose current piano study hardly involved classical scores at all.

The students' descriptions of score-mediated practice centred around work with piano tone, polyphony, phrasing, and the building of continuity at the level of entire compositions and movements. From the viewpoint of such practice, they often mentioned expectations for the development of their aural awareness that could actually concern music-theory subjects in general and not only aural skills. They were generally interested in activities and viewpoints that would enrich their grasp of the music under study: to evoke expressive ideas, to connect the music to stylistic or narrative associations, or to help them to create continuity and dramaturgy at the level of entire movements and compositions. So far, courses in music theory and analysis actually seemed to have given more of such enrichment to many of them than aural skills. In the present course, many found most of the ideas for their score-mediated practice from transposition, figuration and improvisation exercises: activities that were clearly not part of their familiar practice, but which they saw as bringing about new kinds of harmonic awareness. Singing, as previously noted (6.2), already appeared to form a part of most students' work with polyphony and phrasing.

I had expected to build meeting points between the aural skills course and the students' instrumental practice by inviting them to reflect on and develop such skills as memorisation or silent score-reading. The students did bring up such topics in the interviews, and some of them mentioned that they had found ideas to help their memorisation during the courses. In general, however, such technical aspects of the students' practice rarely evoked their most interested reflections. Instead, most students already seemed to have settled upon their basic approaches to practice, and were mainly interested in developing them in ways that would improve the richness and depth of their musical understanding.

The students also voiced polite criticism of some conventions of learning, which they felt many pianists were somehow taking for granted. Several students regretted that their elementary studies had not contained transposition, playing by ear, or practice of idiomatic keyboard patterns without notation, and some of them mentioned how they thought that their foreign fellow students were better educated in these respects. Some students also maintained that a stylistic or historical contextualisation of music could be generally stronger in their familiar community of pianists, and also better supported by teachers.

When discussing their own teaching of piano pupils, even those students who did not find many reasons to critically reflect on their own habits of learning often took an increasingly active and argumentative tone. Several students mentioned how they were encouraging their pupils to improvise and play by ear – even though the students had not done so themselves.

Some students expressed the improvement of their sight-reading as being among their expectations for the course. Such an aim had not been my central concern when planning the courses, and as I found in retrospect, the focus of our courses was too much on aural work, and our material too simple in scope and texture, to really challenge the students' sight-reading skills. Nor did the tasks enable me to judge the students' first-person reports on the condition of their sight-reading skills. Some students, like Elias and Veera (cases I and II, section 7.1), hoped that the keyboard transposition and figuration exercises would also facilitate their recognition of similar patterns in notated music, and thereby improve their reading. They gave positive feedback on the course activities, but our work did not really enable me to judge how much help they really received for their reading. One more student – who was among the most fluent ones in playing by ear (section 6.1.4) – initially expressed her strong desire to improve her sight-reading problems, but admitted at the end of the course, in agreement with myself, that her sight-reading had not gained much support from the course, which had focused on concise music examples and on listening-based rather than reading-based activities.

The analysis of the data generally suggested to me that the research design had not been optimal for challenging the students' habits of score-mediated practice, nor for enabling them to discover new goals or motivating conflicts. Those students who came with strong ideas on how to improve their score-mediated practice had already discovered them before the course. The use of the students' own repertory or complex scores in the course, on the contrary, was rather limited. The students' score-mediated practice, therefore, remained a solitary activity in their practice rooms, which they discussed, but which the course did not challenge or subject to critical evidence as much as it could have.

## 7.2.2 Learning music with shorthand notations and improvisatory practice

Many students had some previous experience with work on the keyboard in ways not strictly prescribed by notation, such as playing from chord symbols or by ear. Such experience mostly originated from their engagement in popular music. A different perspective on shorthand notations and playing by ear, in turn, was offered by the harpsichord major, who was just in the process of learning continuo playing. The students therefore came to discuss and compare how pianists' habits of working might differ across musical genres and traditions. Indeed, more than I had expected, my endeavour to suggest to the students different ways of approaching the piano led them into discussions concerning pianists' work in different musical genres and possibilities of dialogue between genres.

Janne (case III, 7.1) was the only participant in the groups who clearly followed a model of music learning that is typical for keyboardists working in popular music.<sup>102</sup> In contrast to the study of complex scores, he mainly used shorthand notations, which required the performer to design texture, voice leading, and sometimes changes in harmony. Very central to his learning was the imitation of aural models – both recordings and live performances. The practice of idiomatic keyboard patterns and their transposition were also part of his routine practice. Besides the solitary work in practice rooms, he sometimes needed to develop keyboard solutions speedily and publicly while in a rehearsal or teaching. While the keyboard was clearly his dominant instrument for learning music, he also shifted the perspective of the same piece by trying it on other instruments, mostly on the guitar. The written transcription and arrangement of music were also central for his work.

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<sup>102</sup>Janne's descriptions came very close to the characteristics of many popular musicians' learning that Green (2002, 96–97) has described, based on her research with fourteen popular musicians around the London area. The musicians in her study largely taught themselves through focused listening, copying and transcription of music from recordings, by free imitation or improvisatory adaptation of heard music. Peer learning and the imitation of more experienced musicians was also frequent, while conventional notation, tablature and chord symbols were secondary to aural acquisition. Janne's deliberate practice of keyboard patterns seemed to be more conscious and goal-oriented than that of many Green's participants, reminding of the pedagogical models which many jazz musicians and jazz educators use (e.g. Tucker & Kernfeld 2002; Maceli 2009, 31–34).

For the other students, popular music was somewhat familiar through comprehensive schools, informal music making among friends and schoolmates, and courses in ‘free piano’ in music schools. For the music-education majors, popular music was to be a central part of their higher-education studies and expected future work. Only two participants, however, were advanced in their studies to the point that they had already completed some courses in this genre of music. Aside from Janne, two other music-education majors were used to learning and finding pieces on the keyboard totally by ear. One of them was also the student whom I previously mentioned as having sight-reading problems; while continuing her classical piano lessons, she was mostly interested in playing music by ear or composing her own songs in popular style.

Many similar elements to those in Janne’s work, in fact, were contained in the continuo practice, which the harpsichord major in the group was just in the process of learning. He also used shorthand notations, which required the performer to design textures and voice leadings, and even harmonic details. The learning and transposition of idiomatic keyboard patterns was also central to his practice. Improvisation and the need to quickly adapt to solutions in public were also typical requirements for his future work, even though he admitted that he was as yet in the process of learning such skills and therefore somewhat cautious to take part in demanding ensemble work. Even at that time, some tasks in the courses suggested that both he and Janne (case III, section 7.1.3) clearly approached harmony by perceiving and anticipating idiomatic patterns, rather than by orientating in terms of discrete pitches. They recognised harmonic patterns as gestures, which they felt as idiomatic to certain musical styles. One example was the harpsichord major’s ability to recall in great detail the music example that had been part of the final exam, when we met in the final interview one week later. Apparently, both the two students had with the stylistic interpretation of lead-sheet or figured-bass notation developed skills which also benefitted their ability to recognise and predict harmony in common-practice repertory.

Somewhat contrary to my expectations, the course participants’ studies in ‘free piano’ did not suggest a very clear connection to their aural-skills performance. All the music-education majors were studying ‘free piano’ as a compulsory subject and generally talked very positively about their experiences, which nevertheless most of

them had only begun. One music-education major, though, had felt that the rehearsal of demanding pieces even in 'free piano' lessons had stolen time from the development of generic knowledge of the keyboard, which she would have wished to develop. Even three performing majors had had 'free piano' lessons while still in music school, but apparently for such a short time that the experience had not really changed their aural skills or habits of practising. They described how they had learned some basic rhythmic patterns for a selection of popular music styles and some basics of interpreting chord symbols, but had not really developed their skills in learning pieces or approaching the keyboard by ear.<sup>103</sup>

The analysis of the interviews also gave me a healthy reminder of how playing by ear in the courses had been quite different from the ways in which those students who were the most fluent in playing by ear seemed to approach music outside the aural-skills classroom. During the courses, playing by ear had been a part of conscious pedagogical sequences, which were intended to lead towards the conscious analytical study of different musical structures. For the students who regularly played by ear, however, this activity appeared to be much more than a method of learning: a central part of their whole musicianship and a way of knowing and experiencing music. For them, the connection between hearing music and finding corresponding patterns on the keyboard was immediate, whereas the expression of the played structures with any kind of symbols required a conscious and deliberate translation process. (See also Lilliestam 1996, 199–201.) Whereas Janne had deliberately practised the transposition and notation of music, there was one first-year music education major who was only comfortable with keys involving few accidentals, and found it very laborious to connect what she played with notation. Janne, in turn, had developed his notation skills through conscious practice, but as I increasingly realised, in a very different way from the path that was typically followed in formal aural-skills education. Even though his pitch-location skills were above average in the group, much of the way in which Janne described and demonstrated the way he learned harmony was not actually dependent on the ability to locate pitch. While he needed to

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<sup>103</sup>I assume that the relationship between aural skills and 'free piano' studies is likely to be different at present, since 'free piano' has during the past decade gained an increasingly established place in music-school curricula, and its methods and materials have undergone development (see section 2.2.5).

be sensitive to harmonic patterns so as to be able to find them on the keyboard, it could be claimed that one of the least necessary skills was actually the ability to locate tones or chords without the instrument – since they could always be checked by playing.

Another thought-provoking discovery I made, having intended to develop pianists' aural-skills education, was that the students' success in traditional aural-skills tasks actually had the clearest connections to informal activities in music that were more vocal than pianistic in character. Neither the students' classical piano practice, nor their keyboard activities in popular music genres had a straightforward connection to the students' performance and profile in the aural-skills courses. On the contrary, dictation and sight-singing tasks in particular appeared to be most accessible to students who were used to playing by ear as a child, who were used to the playing and harmonisations of songs, and who had a characteristic melodic approach to music, which seemed to be connected to their singing. These were the typical characteristics of the broader engagement in music of the 'melodically oriented' students, who had the strongest pitch-location skills and melodic memory. The students described themselves as having learned melodies by ear and as having used the keyboard to imitate and accompany the melodies – sometimes also using songbooks for assistance.

My research participants themselves were sometimes amused or even embarrassed by the connections they found between aural-skills learning and their apparently simple, singing-related informal activities. On one hand, they clearly recognised that skills such as being able to find or accompany by ear a familiar song were connected to success in aural-skills tasks. On the other hand, the popular image of such musical activities was not considered very respected, advanced, or professional. In comparison to their current piano repertory, the pieces involved in such activities were obviously small-scale and reduced in texture. One music-education major, in particular, who was very active in singing-related activities and who accompanied common singing and composed her own songs, often referred to the apparently childish image of such work – which she nevertheless found very central to her musicianship. Even the performing majors who were less skilled in traditional melodic tasks reflected on the connection and pointed out how funny it was, in turn, to find advanced pianists not even able to accompany common singing at a party.

One generalisation that could be drawn from the data was that the students in principle saw that score-mediated and improvisatory forms of pianistic musicianship, and even their singing-related musical activities, could interact and enrich each other. In the meantime, however, the data also suggested that it was rather demanding for the students to use the skills they had gained in a certain musical genre to the benefit of another. Their musical interests also appeared to be more diverse than the categories conventionally offered by educational programmes, in which classical and popular musics were learned and taught as separate subjects involving their own traditions of practice.<sup>104</sup> During the course, nevertheless, those students who had several sources of musical experience found ways in which they could integrate them to a mutual benefit.

### **7.3 Reflections: musical breadth versus depth**

As evident from this and the previous chapter, during the research all the students explored and discussed some new approaches to their instrument, and my intention was also to develop and enrich their most familiar ways of working as pianists and musicians. When I analysed the data afterwards, the courses seemed to have been most successful in the exploration of the new. The finding of music by ear and transposition and figuration of musical excerpts on the keyboard received a very positive reception from the students who were used to score-mediated learning, and those who were more used to playing and learning music by ear gained new analytical tools and ideas on how to bridge their practical work on the keyboard with their learning of composed repertory. Less successful, in turn, seemed to have been our use of each student's most familiar and best developed pianistic work. I already noted in 6.2 my finding that in the aural-skills courses we had not fully employed the forms of aural awareness that were connected to the students score-mediated learning, and neither those students' skills who played by ear with the most fluency. This interpretation grew stronger once I returned to analyse the interests and expectations for aural awareness that the students had expressed in connection to their most

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<sup>104</sup>It needs to be noted that in music schools, the separation of musical genres is not likely to be equally sharp at present as during my data-gathering, see section 2.2.5.



familiar pianistic work, and compared them with what we had managed to do in the courses.

In the very first interviews, the students had discussed their ideas on aural awareness mostly at a rather general level and voiced expectations that could be connected to all theoretical subjects and not merely to aural skills. What was very clear in the first interview, however, was that the students strongly associated aural-skills learning with the idea of thoughtful, professional and concentrated musicianship. Many of them described how after entering higher education they had sought to develop their practice in an increasingly professional and personal direction, and gave examples of musicians whom they found as doing thoughtful and committed work. They also voiced ideas that were connected to aural awareness in a broad sense: how they rehearsed pieces they were studying in their minds and sought to find an appropriate mood and character for the music, how they worked on scores, and how they maintained good concentration and kept their ears and minds open when working. Many students also described how their values and ideals manifested in their pianistic work and practice – sometimes in great detail.

After the courses, I felt it was useful to return to the interviews in which the students had begun the discussion from their most familiar contexts of pianistic work, and also brought up ideas on aural awareness, which were not strictly framed by the conventional tasks and requirements of aural-skills courses. Moreover, I returned to my slight feeling of discrepancy between many students' rich descriptions of how they sought to cultivate their aural awareness in their pianistic work, and the apparent simplicity of much of the work in the aural-skills courses. After all the students' devoted talk about their work with complex piano pieces and the search for thoughtful and stylistically sensitive approaches to practice, the tasks and materials I was offering them in the aural-skills courses were not very complex or elaborated. We started from concise diatonic excerpts with a melody, a bass line and a few chords, proceeded slowly towards more complex chromatic harmony, but mostly stayed within very simple textures and concise examples, and the students spent most of the lessons with apparently simple keyboard work, singing, improvisation or transcription (Appendix K/Lesson activities). The ostensible simplicity of the tasks did not prevent the students from participating in good spirit, but many of them noted the difference in the complexity of the material between the courses and their pianistic work, and I

felt myself that the work in the courses left some aspects of their instrumental knowledge unused.

When I analysed the data afterwards, it appeared to me that the need to return to much simpler material in the aural-skills courses relative to the students' pianistic work was, on one hand, a necessary consequence of the development of generic knowledge, and was related to the idea of *flexible practice*, which the students valued (section 6.3). On the other hand, the results also suggested to me that the discrepancy could be reduced if we could give increasing attention to forms of musical awareness that were characteristic to many students' pianistic work, and which we did not employ in much depth in the present courses. I will briefly consider each of these two viewpoints.

As I described in 6.3, many students believed that aural-skills courses and theoretical subjects of music could best support their pianistic work by offering generic awareness and *flexible practice* of harmony, and even of other musical parameters and structures. By this term, I referred to the idea of varying and comparing the musical structures under study, which was an essential element of the keyboard activities in the courses. The students also noted how the development of breadth and generic knowledge was time-consuming – the very reason why such practice was often left aside during their pianistic studies in the pressure to produce quick results. The need to return to less complex materials was in such a context also accepted as a quite natural requirement, as exemplified by the following quotation:

*Playing by ear is not a useless skill for anyone. Personally, I need to start at a rather low level, but then there is the possibility to proceed to more demanding tasks. (What I have noticed is that this skill can really be learned.) (Panu, learning journal, January 2000.)*

For the music education majors, the skill of devoting oneself wholeheartedly to apparently simple tasks was a conscious part of what they conceived as their role and also their skill as professionals: "And I also hope that people could see in me, as a music educator [...], that I love music myself. Not just something like let's play this song once more..." (Janne, initial interview). The previous quotation was also similar in spirit to some of the other students' reflections on how patient work with apparently simple materials was one part of the cultivation of imaginative and

explorative approaches to practice, which they viewed as central to all musicians. As they noted, the enjoyment and meaningfulness of one's own musical experiences was also a prerequisite to serve others, whether as a performer or an educator.

As a second viewpoint on the complexity of aural-skills tasks and materials relative to the students' pianistic work, it is also worth noting that the students' interests in aural awareness, in connection to their pianistic work, mostly concerned rather different types of awareness than in typical aural-skills tasks. The findings therefore led me to reflect on the necessity of all the demands for the students' aural awareness which were involved in our course activities, if those demands made it difficult for us to use repertory which would be equal in complexity to that which was central to the students' pianistic work. When describing what the students conceived as the kinds of listening and aural awareness they found important to cultivate in their pianistic work, they stressed such aspects as reacting sensitively to harmonic changes, having a clear anticipation of each phrase before playing it, and being able to rehearse music in one's mind without the instrument. None of these skills actually required that the students be able to label the harmonies or even find them on the instrument by ear, to sight sing or even silently read previously unheard music, or transcribe anything into notation. Especially with those students who mainly learned music with scores and worked on the same compositions for long periods of time, the types of aural awareness they described were more oriented towards recognition and reaction, and towards the shaping of previously learned material, than the active production and constant learning of new material, which was typical for aural-skills courses.

I also consider it worth noting how listening to different lines and layers in music had often still appeared in the aural-skills course as a rather technically focused activity in comparison to the students' pianistic work. As pianists, the students were working for an increasingly refined aural grasp of musical textures, but so that they could feel the musical sound and the instrument as a tight unity: a clear image of the desired piano sound often quite naturally produces the appropriate control of movement. The students also described themselves shaping their image of the desired sonic result by experimenting with their touch on the instrument. Such work was naturally familiar to me, being a pianist myself, but the analysis of the interviews nevertheless led me to reflect on its relationship with the aural analysis tasks that we had done in the aural-skills courses. Some students even appeared to be very careful

and discriminating about when they sought to imagine music through the instrument, and when to distance themselves from it. For this reason, one of the students had even abandoned the silent study of scores at some stage in his learning. As he described, score-reading without the instrument had given the activity an undue technical character, whereas he found it more important to seek an atmosphere which would stimulate his imagination and keep his technical and perceptual learning unified.

Some of the most experienced students devoted quite a lot of attention in their interviews to the connection they felt between aural awareness and musicians' general concentration and state of mind when working. The students seemed to find the topic especially central and challenging in situations that set high demands for their reading and writing of music, and therefore also dwelt on it at some length when they were entering the aural-skills course. Many of them had experienced how music notation posed special demands for the musician's sustaining a productive state of mind, and the study of aural skills appeared to be particularly demanding.

Issues of concentration appeared in all the students' interviews; they felt that the practice of their aural awareness both required and developed their concentration skills. Experiences of having been absent-minded or strained when practising were familiar to all, but there was quite a clear difference between the way in which the younger students, and those further in their studies, talked about the topic. The students with the highest age and experience as performers or teachers tended to demonstrate an awareness of the need to regulate their minds at levels that are only partially conscious and reachable by deliberate control. Optimal concentration could clearly not be forced or developed by rational decisions alone. Instead, some students described in great detail how they had – with years of practice – learned to search for an appropriate mood for their work.

Some students also explicitly discussed how their global feeling of clarity and safety became visible in their ability to grasp meaningful units in music, which they felt as being a special challenge when working with notation. As one of the performance majors described, the affluence of notes in extensive piano compositions easily obscures musically meaningful units, or preoccupies the musician with concerns about correct execution and leads to a collapse into an unproductive, strained or mechanical approach. He therefore described the musician's constant need to contextualise the music when working with scores: to feel the music as belonging

somewhere and to project contexts onto the music that would feed the imagination and enable the musicians to find further ideas and to make musical decisions. His descriptions of how he believed that a feeling in the music belonged to a certain context, involved quite a rich use of stylistic background knowledge, free imagery, and experimentation with the instrument. Even the choice of where to practice was central for him, so as to tune his mind to the work. In comparison, aural-skills lessons often appeared poor in the types of devices that could feed the musician's thinking, and posed the particular danger of the musician collapsing into an acontextual, mechanical approach to notation. Indeed, he belonged to those students who came to discuss how they often recognised themselves as reading scores in aural-skills lessons differently from their work as pianists: discrete pitches gained disproportionate weight. The few occasions when we used mechanical, especially composed rhythmic exercises in the aural-skills course raised the following reflection:

*If people get a new score to play, there is a lot of stylistic knowledge that they can combine. For example, when working with singers, the reading of an opera score and a lied score is quite different. Then, if you have an exercise in the reading of rhythm, they are somehow disconnected... at least I do it in such a way that I put a framework there, use an articulation or something, start to play, and concretely shape the music. (Olli, classroom discussion, February 1, 1999.)*

As he felt the notation did not provide him with enough stylistic cues, his solution during the lesson was to play with the task, and to invent vivid and often humorous-sounding articulations and phrasing.

I considered it very valuable to have some students in the group who were able to express very articulate ideas on their habits of working as pianists and musicians, and yet needed to work with very basic aural-skills tasks. Some of their problems in approaching the classroom tasks could even be interpreted as resulting from their being even too experienced for the present course. Apparently, they had already learned to require qualities from their musical work that they found difficult to maintain in a course in which the contents and requirements were planned for those who were beginning their higher-education studies. In my view, however, such a critical and personal approach to notation, aural awareness, and musical practice

represented a direction in which even the younger students should be encouraged, instead of just the obedient reception of the course contents. The younger students' talk, furthermore, suggested that many similar themes and viewpoints also interested them, even though they were not as articulate in their descriptions, or were less brave to express themselves if they saw the courses as conflicting with their views.

#### **7.4 Implications and further questions**

In all, the students' interviews suggested to me that their need to find their personal musicianship and to obtain a share of musicians' cultural knowledge could at best provide meaning and motivation even for their aural-skills learning. During the research, we reached some very fruitful discussions on the topic, but the elder and more experienced students seemed to be more able than their younger peers to translate their abstract ideals into action plans. This was a task in which formal education, in my view, could give more support.

The students generally thought that theoretical subjects of music could help them towards musicianship, which they viewed as professional, and of a high quality. They were interested in subtle skills, such as expressive and stylistically sensitive performance, which were hardly learnable through straightforward rules, but instead were dependent on the tacit knowledge of the musical community. In particular, the most experienced students had also learned to expect certain general characteristics from all their study of music, such as a holistic sense of one's goals and purpose, and an appropriate state of mind while working – which they also wanted to retain in aural-skills learning. Such viewpoints, in fact, suggested that the students had already learned to pursue certain characteristics in their musical activities, which previous research has suggested as being typical for professional and skilful action. While skilful actors seldom solve problems by applying bodies of separately learned technical knowledge, the actor's clear sense of purpose is central, and a 'reflective conversation with the situation' in which the actor's perception of the task, its goals and values, and evolving solution to it, mutually shape each other. (E.g. Schön 1983; 1987; Dreyfus & Dreyfus 1986; see section 3.2.1.) These findings suggested to me that the students could be better supported in integrating their aural-skills learning into their broader learning processes and developing professional skill in music, so that it would not remain an isolated technical field of study.

The interviews also illustrated how the notion of pianistic musicianship is complex and dynamic – or as I view it, most usefully understood as such when educating aspiring professionals. With my research design, I had of course led the students to problematise and discuss what kind of activities, skills and values were central to their pianistic musicianship. The interviews and work in the courses, however, strongly suggested that the types of aural awareness they would need as future professionals could not simply be taken for granted, but needed to be worked out and interpreted in a personal way by each student. The necessity for such reflection also became visible in the data through many of the students' responses. They tended to turn my questions regarding their specific habits and skills into more general reflections on what they actually valued in their musicianship. In making sense of these issues, in turn, the students often referred to a rich social context of peer musicians, audiences, teachers and more distant artistic models.

This time, my rather fixed plan for the course reduced my possibilities to take advantage of the interviews in practice. On the basis of this experience, the whole function of aural-skills education in higher education could be further designed so as to support the students' finding of their personal goals and methods of musical practice. This means that aural-skills educators would also need to select and frame educational contents more freely and interactively than what we had done in the courses so far: through a dialogue with the students' pianistic work and their current interests and challenges as musicians. As part of such development, aural-skills education could also devote more attention to activities that are most familiar to the students, and clearly part of their public profile as musicians. Such a direction, however, also requires the recognition of musicians' instrumentally mediated musical awareness as a worthwhile goal in itself, and the ability to see some traditional requirements in a relative light. In the next chapter, I will further discuss such a possibility.

## SUMMARY

The students spoke about their interests and ideals for aural awareness and musicianship rather broadly in their interviews – which also suggested ways to further develop the aural-skills courses. The students also discussed different models of pianistic musicianship. Their discussions of score-mediated learning of repertory were

characterised by a search for an increasingly personal approach, which should also be stylistically sensitive and informed. The students also noted that early music and popular music, which involved learning music through shorthand notations and improvisatory practice, often exemplified types of musical practice that the students viewed as generally useful for pianists' aural awareness.

The students connected aural skills with the idea of sensitive and cultivated musicianship – even though many of the activities and materials in the courses had been apparently very simple. The students discussed the necessity of spending time with simple materials if desiring to develop the breadth and flexibility of one's musical skills, such as one's ability to produce and recognise harmonic patterns in different keys and textures. Nevertheless, the results also suggested that aural-skills learning could also employ more complex materials through activities that were perceptually less demanding. Some students also discussed the skills of controlling one's concentration and emotional approach to music, which they had developed in their pianistic work, and which they also found related to the perceptual skills involved in the aural-skills courses.





## **PART III: INTERPRETATION AND REFLECTION**



## 8 Aural skills and instrumental mediation

The pedagogical idea behind my practitioner-research project was to connect aural-skills education to my students' knowledge and interests as pianists, and in this way promote its meaningfulness. In this chapter, I will discuss and evaluate my findings in the light of this overarching goal, and also return to some literature for directions regarding future development. As I described in Chapter 6, the use of the students' instrument seemed very helpful in the courses, and the students expressed how aural-skills study gave them knowledge of musical materials and structures that were broader than what they had gained through their instrumental studies alone. I also noted, however, that we had not employed the students' musical awareness in such a broad and inclusive way as I would have desired (6.2), and that the students' pianistic interests and concerns could have been connected to the courses further than what we had managed to do.

As I drew my findings from the practitioner-research project together, and related them to action-oriented literature, many of the issues that seemed to have remained problematic or partially developed can be expected to be improved by an increasing acknowledgement of the students' *instrumentally mediated awareness of music* – their ability to experience and anticipate music through their instrument; the piano. The courses had been quite strongly shaped by the expectation that the students would reach a rather traditional set of requirements, including dictation, sight singing and harmonic analysis through listening (Appendix D/Course description). This meant that I had mostly treated the keyboard work and the students' pianistic experience as facilitators and as means of aural-skills learning, but I had not really given them a position as intrinsically important goals. In retrospect, I realised that this situation had restricted the possibility to draw on the students' ideas and interests regarding musical development. It had also represented a somewhat limited version of the action-oriented concept of aural-skills learning. Many action-oriented theories of human learning, namely, conceive tools as essential components of human thinking and intelligence (section 3.1.2). On the basis of this idea, it is quite logical to see that musicians have types of aural awareness that are mediated by musical instruments – musicians' tools – and inseparable from the situations in which the musicians use

their instrument. My data, indeed, quite often suggested the importance of such awareness, but as I retrospectively realised, we did not quite manage to do full justice to it in the courses.

In the following sections, I will first return to some pedagogical and theoretical literature, which I see as particularly relevant for discussing the role of musical instruments for musicians' aural awareness (8.1). Then, I will return to review and discuss how the students' instrumentally mediated awareness of music was now involved in the practitioner-research project and to suggest some possibilities for its further employment (8.2 and 8.3). I will conclude the chapter by discussing how to further acknowledge the students' instrumentally mediated musical awareness when setting goals for aural-skills courses (8.4).

## **8.1 Forms and layers of musical awareness: in dialogue with previous literature**

I already noted in Chapter 7 how the students brought up many musical interests and ideas in the interviews, which I saw as highly relevant, but which remained solely as discussions and were not much put into practice in the aural-skills courses. For example, the students' pianistic work involved forms of harmonic awareness that were different from the skills we developed in the aural-skills courses: more global in nature and mostly focused on reacting to harmonic changes and the expressive shaping of musical phrases and formal units. The students' descriptions of their pianistic work also illustrated that they had learned to focus their aural awareness on different layers and units in music in tight interaction with their command of the instrument. While such forms of aural awareness were all but unknown to me, being a pianist myself, the analysis of the data subsequent to the courses suggested that pianists' aural-skills education could still further acknowledge, use and develop approaches to music that were central to the students' work as musicians.

The analysis of my findings after the courses increasingly led me to consider some redefinition of the goals and requirements of the courses in future, in order to facilitate the connection of the courses to the students' previous, pianistically oriented knowledge. So far, I had accepted the convention that aural-skills activities quite radically differed from many students' familiar approaches to music – for example in

requiring them to approach music totally by ear or through their voice – even if such approaches were rarely part of the students’ work as instrumentalists. While the students were basically willing to broaden their skills, the analysis of the data led me to see there could also have been alternative approaches to aural-skills learning, which would have not immediately cast the students so far from their pianistic habits. Especially those students who had mainly played from scores seemed to be so far from their familiar ground that they found it difficult to actively use their musician’s experience during the courses. I also realised that the requirements wherein the students would attain fixed and rather traditional standards in dictation, harmonic recognition and sight-singing tasks easily implied that the aims of aural-skills learning were fixed and static. Such an unintended message was quite contrary to my endeavour to present aural skills as a subject that should enrich the students’ musicianship and support their individual ways of learning. At times, the concern about reaching the requirements seemed to move some students’ attention in a mechanical rather than musical direction: the production of required results easily overthrew the feeling of communicating musical ideas, gestures and expressions.

As is frequent in action-research projects, the analysis of my data revealed new possibilities regarding the application of previously known literature. My findings, namely, seemed to support some previous pedagogical work in music that has suggested activities and approaches to support instrumentalists’ aural awareness. Aside from literature specific to music, I also consider that the dialogue between aural-skills education and the students’ existing pianistic knowledge would benefit from the further application of some ideas on the cognitive role of tools and technology, as presented in action-oriented theoretical literature. To suggest the usefulness of such viewpoints from various research fields, I have decided to return here to the work of three authors, who represent very different areas of expertise. Firstly, the British pedagogue George Pratt (1998) has approached musicians’ needs for aural awareness on a much broader basis than has been common among aural-skills educators, and has also recommended refining the traditional goals of aural-skills courses. Secondly, David Dolan (2005), in his work on pianists’ and musicians’ improvisation, has addressed global types of musical awareness and anticipation in a way that I find highly relevant for aural-skills education. Finally, I also find it useful to go beyond literature specific to music pedagogy and apply some ideas to the role of

musical instruments, which have been presented by the philosopher Don Ihde (1976; 2010) concerning the role of tools and technology in human perception and thinking.

George Pratt and his co-workers in Huddersfield University have suggested an approach to aural-skills education that quite radically departs from the traditions of the conservatory subject. (See also sections 2.2.2 – 2.2.3.) Pratt strongly criticises conventional aural-skills education for “over-stressing the significance of facility in perceiving, identifying and naming aspects of pitch and duration, at great cost to other expressive musical elements which in practice are no less important” (Pratt 1998, xii–xiii). As an alternative, he suggests a rich variety of tasks that purposefully give attention to those musical elements he views as being traditionally ignored in aural-skills education.<sup>105</sup> Of special importance in this research is his basic idea of awakening students to the forms of aural awareness they already possess at somewhat passive levels, and suggesting to them how to focus and develop it in various dimensions. The material in his exercises is authentic music, mostly recorded and live performances, which in some exercises he also leaves to the students to choose.

Pratt starts many of his exercises with questions and tasks that lead musicians to pay attention to how music is already present in their experience, and how various musical elements are used for musical expression. His exercises range from the observation of background noises in our environment, to tasks that focus on specific musical elements such as pitch, tone colour or register. Rhythm, metre and pitch are also included, but with a focus on tasks that engage the students in discussion, without aiming at a single correct answer. He favours open-ended tasks and emphasises work in which the students listen, make notes on their observations, and then share and discuss them with a partner. His tasks also combine music listening with the use of the students’ instruments, playing by ear and improvisation. Somewhat similar activities have also been suggested by Covington and Lord (1994, 167–169), whose work has been influenced by the Huddersfield aural-skills programme. The same process of alerting students to elements they already perceive in music at intuitive levels is also

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<sup>105</sup>Pratt lists different ‘elements of musical expression’, suggests various tasks to focus musicians’ awareness on each of them, and stresses how the analysis of these elements needs to proceed to what he calls ‘aural synthesis’. His list of elements comprises metre, rhythm, pitch, texture, timbre, compass, range, density, dynamics, articulation, placing in space, pace, and structure. (Pratt 1998, 12–45.)

central to aural-skills education for chamber ensembles, developed by Bergby (2007a) and her colleagues in the Norwegian Academy of Music.

I believe it is worthwhile to devote some attention to the work of Pratt and his followers, since his suggestions for developing aural-skills education resonate quite strongly with the needs for further development that I recognised in my aural-skills courses, and yet these suggestions differ in aspects that are central to the action-oriented perspective. Leading the students to recognise and refine types of aural awareness that they already have at passive levels, was very much the process that I too had sought. Also, Pratt's pedagogical suggestions on engaging students in discussion, interpretation and personal judgement, rather than the pursuit of single correct answers, would quite obviously be helpful in improving the kind of musical richness that I found needed development in my aural-skills courses. Yet he continues to build on some assumptions that have been typical for aural-skills education, and which from the action-oriented viewpoints are somewhat problematic.

A restriction I feel in Pratt's text is that he does not seem to make a clear distinction between the conscious description of music – such as the verbal discussions of music from the various analytical viewpoints he suggests – and the production of music either concretely or mentally – through playing, improvisation or the imagination of musical solutions. From the action-oriented perspective I suggest in this research, however, these are distinct approaches. A person's ability to perceive and discriminate music in action is not dependent on their ability to describe it. (See 3.3). I also consider it problematic that when explaining the principles and underpinning ideas of his exercises, Pratt tends to regard the most detailed and conscious types of aural awareness as the obvious ideals to be developed. In his exercises, verbal description and discussion of music have the chief place, visual expression is also in frequent use, and various productionally oriented activities occupy the third position. Although he talks about the importance of 'aural synthesis' – the judgement of how musical elements are used together in music – his exercises often start with conscious analytical observations at a very detailed level. He suggests, for example, the analytical listening and discussion of the timbre or intonation even of single tones, and then moves to larger musical units.

In my view, aural-skills education would really benefit from the type of open-ended and imaginative work as exemplified by Pratt, but it also requires recognition



of how musicians need to adjust their musical awareness between details and broader units, and between explicit and implicit types of awareness. According to the concept of aural skills that I suggested, drawing on action-oriented literature, the most important means to support students' thinking in sound is to have them make music and hear the result, or to respond to aurally perceived music through musical action – not through words or visual means. As I explained in section 3.4, people already demonstrate the most basic forms of aural awareness when they control musical sound by movement, and this concrete control can also be developed into the mental control of sound – the ability to evoke or shape musical experiences in one's mind. The conscious description or discussion of music is built on basic nonverbal skills of controlling musical sound – a somewhat reversed order when compared to the exercise arrangement in Pratt's book.<sup>106</sup>

My results also strongly suggested that many students needed pedagogical support mostly in order to move in a global direction when developing their aural awareness – rather than towards details. They needed to learn how to grasp idiomatic harmonic or metric patterns in music even when discrete pitches were difficult to discern, or to trust their ability to play by ear or improvise music, without demanding of themselves that they be explicitly aware of the inherent structures. Essential to many students' learning was that they could vary musical patterns and relate them to each other, so that they learned to grasp similarities and regularities that existed below the details – the idea of *flexible practice*, which I explained in section 6.3. I even interpret many of Pratt's own practically oriented exercises as working in a similar way. I feel, however, that the explicit discussions of aural-skills education and the ordering of exercises in his text over-emphasise explicit and detailed thinking – thereby reiterating the problem that I have witnessed in a lot of previous literature in the field.

Because of the need to move in a global direction, i.e. to think ahead in music, has typically not been very well addressed by aural-skills pedagogues, I consider it

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<sup>106</sup>The visual description of heard music that Pratt frequently suggests deserves its own discussion (see e.g. Bamberger 1994; Barrett 1990). Without delving further into this topic here, I note how students may use visual description in a way that is close to concrete action, for example; jot down notes on beats, phrases or dynamics in real time while listening. They may, however, also visualise their experiences in more abstract terms.

useful at this point to consult some literature on improvisation – a field that also concerns musicians’ aural awareness and imagery. A pedagogue who has particularly discussed the importance of developing musicians’ sense of meaningful gestures and feeling of musical directionality is the pianist David Dolan (2005). He has worked very thoroughly on classical musicians’ improvisation pedagogy, with the idea that improvisation, besides being a skill in its own right, is also a way of cultivating musicians’ awareness of musical structure, expression, and stylistic elements.<sup>107</sup> Such goals, indeed, come very close to the ideals that aural-skills education has been expected to fulfil, and therefore make many of Dolan’s viewpoints highly relevant for aural-skills educators.

Dolan maintains that many of the demands of improvisation, and therefore also its positive contribution to musicians’ thinking, concern the integration of specifically learned musical skills with very basic and natural human skills related to communication and emotions. As he describes, improvising musicians learn to connect their command of different musical materials and structures with what he calls ‘natural schemes’: meaningful units of expression that are derived from basic forms of human communication, such as gesture and speech. (Ibid. 102–109.) In the pedagogical methods he has developed, a central principle is to educate musicians to retain and strengthen their sense of meaningful gestures and directionality – which he encourages by various means, including question and answer games and speaking or acting utterances so as to support musical conversation (ibid. 118). Retaining a safe and playful atmosphere is a natural part of such education, which encourages emotional expression, sensitive listening and alertness in each situation.

Dolan also discussed the types of structural awareness required in improvisation, and stresses musicians’ need to grasp structures and connections that transcend the note-to-note surface of music. He applies the ideas of the music theorist Heinrich Schenker and suggests many types of work in which the students play harmonic and voice-leading reductions of the musical work under study, improvise their own figurations on the reductions, and compare different improvisations and composed examples that are based on the same reduction (Dolan 2005, 122–126). He

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<sup>107</sup>My awareness of the helpfulness of Dolan’s ideas with the issues I found in my data has also been influenced by his masterclass in Helsinki in 2001.

is also among the few authors who recognise that the grasp of directionality in music may sometimes require that the musician specifically learn to bypass analytical judgement for a brief time (ibid. 118).

Even though Dolan also works with chamber music groups, his approach is obviously guided by his experience as a pianist, one who has learned to tackle the specific challenges of mastering complex textures and harmonic structures. Although he does not discuss very explicitly how the use of the instrument contributes to the types of musical awareness he seeks to promote, I would say that his pedagogy also exemplifies the positive functions that musical instruments may fulfil in musicians' aural awareness. As his music examples demonstrate, the game-like musical tasks wherein he guides his students to exchange musical gestures and expressions, very much rely on experimentation and creative play with the instrument.

Because aural-skills educators have traditionally approached instrumentalists' knowledge in a rather normative and even negative tone (2.2.4), I consider it useful to further complement Pratt's and Dolan's musical viewpoints by examining literature outside of music – namely, the work of the phenomenologist Don Ihde. He takes a strictly descriptive view of people's capacity to extend their cognition through tools or instruments, and how tools and technology shape human perception and thinking.<sup>108</sup> He is one of several authors to have drawn on the ideas regarding tools and technology by the phenomenologist Martin Heidegger. Both Heidegger and Ihde share the basic action-oriented idea; that the relationship people establish with their environment in concrete action also forms the basis of their abstract and symbolic thinking. Tools and technological instruments form part of this interaction and enable people to shape their environment, but also the tools themselves shape human perception and knowledge.

A central distinction Ihde makes, drawing on Heideggerian philosophy, is between the types of uses in which tools are themselves rather invisible, and those in which they are consciously attended to. In familiar and fluent action, the actor's attention is focused on the object of action. The tool in itself – be it a hammer, a

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<sup>108</sup>Although Ihde himself writes about *technological instruments*, I will, for the sake of clarity in the present text, use the term *technological tools*, and reserve the term *instruments* for music. I draw here on his early book *Technics and Praxis* (1979), and to a lesser degree, *Embodied Technics* (2010).

dentist's probe or a magnifying glass – is not in the focus of attention, but rather *embodiment related* to its user, as Ihde calls it (Ihde 1979, 8).<sup>109</sup> To adapt the idea to music, musicians may play their instrument in a natural and fluent way and focus their attention on music, but not focus very consciously on their actions upon their instrument. If the tool, however, is complex or alien enough to require special attention, the fluency of action is interrupted. The tool becomes the focus of reflection: *hermeneutically related* to the actor (ibid. 12). By the term hermeneutic, Ihde points at the need for people to interpret and learn to 'read' their more and more complex instruments. In music, musicians may also consciously attend to one's instrument, as a pianist does when consciously attending to fingerings or to the touch of one's fingers on the instrument.

Ihde also describes how tools enable people to alternate their awareness between detailed and global aspects. Even a basic technological tool, for example a dentist's probe, enables its user to examine the surface of the tooth at very different levels of detail than through the use of hands alone, and a magnifying glass enables a sharpened vision of details. By making units and structures available beyond those that are directly accessible through the human body, such tools *extend* perception or *amplify* some dimensions of it. At the same time, the instruments *reduce* other characteristics typical for mundane perception – in the previous examples, the area to be investigated. (Ibid. 18–23.) The more complex the instruments, the more radical becomes the discontinuity with mundane perception.

In their apparent simplicity, the changes Ihde describes are in my view highly important when seeking to understand how musical instruments contribute to musicians' aural awareness, and how it is possible to develop the types of flexible aural awareness that the students clearly valued. Specific knowledge always requires as its counterpart a reduction in some dimensions of knowledge, at least temporarily. Instrumentally mediated action also involves a lot of knowledge that is manifested in action, but which the actor cannot and needs not describe.<sup>110</sup>

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<sup>109</sup>The distinction is based on Heidegger, whose terms were *vorhanden/zuhanden*. Heidegger's concepts have previously been applied to music by Anneli Arho (2004, 157–158).

<sup>110</sup>Some neurocognitive research on how people who use tools incorporate the tool into their body schema is described by Clark (2008, 38–39).

The authors on technology have also recognised how technological tools tend to encourage particular directions of knowledge acquisition, intellectual activity and even imagination. Ihde talks about the ‘latent telic inclinations’ of tools. In his example, merely typing is likely to encourage a different kind of verbal thought than handwriting. (Ihde 1979, 42–43.) Increasingly complex tools invite people to focus their knowledge acquisition on the aspects that the tool is good at displaying (ibid. 47–48). Still, Ihde acknowledges that such shaping occurs quite naturally and often unreflectively as people act: concrete or technological tools shape cognition by their sheer presence in action, without the necessity of the actor’s conscious intellectual effort.<sup>111</sup>

To return to my data, I believe that by combining the ideas of Pratt, Dolan and Ihde it is possible to analyse and discuss in more refined ways how far we progressed in employing the students’ existing musical awareness, and what may be some essential steps for moving forward. While Pratt and Dolan draw attention to processes whereby educators can help the students recognise and develop their existing musical awareness towards heightened activity and sensitivity, Ihde offers tools that aid the understanding of how musicians move between conscious and detailed, or explicit and implicit types of aural awareness. In the following sections I will return to my students’ cases for some further discussion. I organise the text by concentrating first on how the students worked *from sound to symbols*, wherein I include playing by ear, mentally projecting music to the keyboard and also musical improvisation (8.2). All these activities basically represent the production of music on the basis of more or less precise aural anticipations. I will then address the opposite direction *from symbols to sound*, in which I will include score-mediated playing and silent score-reading (8.3).<sup>112</sup> In both of these directions, it is possible to interpret the encounters between my participants’ musical backgrounds, and the activities and approaches in my courses, by considering how the piano as a ‘tool’ transforms the musician’s access to

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<sup>111</sup>In metaphorical talk, musical instruments and music notation are often called musicians’ ‘tools’. The specific tool concept of Ihde and Heidegger has been previously applied to music by Arho (2004). Lilliestam (1996, 198), in his discussion of playing by ear among rock musicians, compares music notation to a tool and voices very similar viewpoints to those of Ihde: notation as a tool shapes people’s thinking in ways that are often not recognised.

<sup>112</sup>For definitions of different types of playing with or without scores, see section 3.4 and the Glossary.

global and detailed aspects of music, relative to singing or other direct uses of one's body. Likewise, the piano may sometimes be a natural and invisible mediator of the musician's actions, but sometimes becomes a conscious focus of reflection. I consider that to really support instrumentalists' musicianship, aural-skills education needs a refined view of these different possibilities in order to help the students benefit from them.

## **8.2 Playing by ear and projecting music onto the keyboard in the practitioner-research project**

I had planned to encourage my students to play by ear in the aural-skills courses and to use playing by ear as an approach to aural-skills learning. I had also assumed that the students would benefit in their aural analysis of music by projecting music onto the keyboard: experiencing music through the keyboard without playing concretely. As I already described in Chapter 6, the research experience basically supported the usefulness of these approaches, but also suggested that their sensitive and effective pedagogical application deserved further attention and development. So far, I had employed the keyboard work in the service of rather traditional course requirements, without giving the students' use of their instrument full attention as an intrinsic goal of the courses. We proceeded rather quickly towards increasingly complex harmonic material, and the keyboard activities were usually only a phase in a series of tasks, which also involved the notation and harmonic analysis of music. (Appendix K/ Lesson activities.) The students did not have very much time to play by ear as an independent activity, or to develop alternative or very personal solutions to the keyboard tasks. In light of my analysis of the data, however, the students' use of the piano – their major instrument – for aural-skills learning could be granted more attention in its own right.

As I described in Chapter 6, many challenges in the students' learning processes were related to the grasp of meaningful patterns and units in music, and also to shifts between more and less precise and conscious types of musical awareness. When alternating between playing by ear and notation-related activities, both the students who played by ear fluently and those who only occasionally practised this skill noted the different feeling of intuitively finding one's way on the keyboard, as opposed to

consciously thinking of chords or pitches. I found myself not entirely successful in conveying my respect for playing by ear to the students as clearly as I had wished (section 6.2). The ability to shift between more and less precise musical awareness was also central to the learning processes of the ‘melodically oriented’ students, who first approached many aural-skills tasks in a very detailed and often slightly mechanical way, but gradually learned to grasp harmonic patterns and to connect harmonic analysis to ideas of musical tension, directionality and expression (sections 6.1.2 and 6.2).

If I connect my findings to the previously described ideas of Dolan and Ihde, the shifts the students experienced when moving between playing by ear and notating and analysing music can be conceived as a natural consequence of using the piano in different ways. When playing, it was very natural for the students to focus their attention on the musical sound, and thus not to focus on their instrument. In Ihde’s terms, their use of the instrument could be called an *embodiment relation*. The conscious analysis of pitch structures, however, required a shift towards a different type of awareness, in which they consciously attended to the harmonic structures and pitch relationships in the music and used their instrument for this. The instrument became the conscious focus of attention: in Ihde’s terms, *hermeneutically related* to its user.

Somewhat paradoxically, I experienced that my students’ tendency to forget details and to be guided by their sense of forward motion when playing by ear actually came very close to the musical virtues that Dolan (2005, see 8.1) describes as essential for high-level musical thinking: a sense of meaningful gestures and directionality. Yet the students often appeared to be unnecessarily concerned about their inability to label or analyse the structures they played. It would certainly have been helpful to consciously discuss the distinct natures of playing by ear, notation and analytical description of music, and to clarify that each these approaches was valued. (See also 6.2.) In fact, the participant Janne, who was the only one whose regular work as a musician involved notating music that he heard (7.1), very clearly described how he had learned to leave time for the shift between playing by ear and the more detailed types of awareness he needed when writing music down. During the courses, the students also appeared to retain their sense of musical gestures and expression better when I gave them tasks that guided them to analyse harmony in a somewhat

global way, such as the improvisation task in which I only gave them the cadential patterns with the instruction to find meaningful harmonic progressions (e.g. lesson 8.2.1999, Appendix I/Lesson summaries). Whereas such activities were then used only a couple of times, their increased and regular use could reduce some of the problems we then faced in integrating the students' playing by ear and analytical concepts.

If applying Ihde's terms, the 'melodically oriented students' tendency towards too detailed and somewhat mechanical thinking and the ability to conceive tonal relationships only in limited keys can be understood as problems related to the 'latent telic inclinations' of the keyboard (section 8.1). If the students only listened to music, I did not find any problems in their ability to grasp musically meaningful units. Discrete pitches and absolute note names, however, are the most obvious units that the keyboard displays, and thus gained disproportionate emphasis in the students' thinking, before they had learned to describe what they heard in more appropriate units and in different keys. It was, indeed, thought-provoking for me that there were so many students who appeared to be very dependent on keyboard projection for solving aural-skills tasks, and yet seemed to use the keyboard in this context in such a limited way – actually more connected to their song-playing during childhood rather than their later instrumental studies. It is therefore possible to say that the students developed their use of the keyboard in aural-skills tasks from a limited childhood tool to a level that supported their musicianship as aspiring professionals.<sup>113</sup>

The results also suggested to me that the relationship between playing by ear and the projection of music to the keyboard without concrete playing deserved further study. Many students' learning processes in harmonic analysis suggested to me that a dialogue between playing and the analytical study of musical structures could be very fruitful. Nevertheless, those students who were the most fluent in playing by ear could consciously project music to the keyboard in a much more limited way than what they could play – in the sense of visualising or describing the paths or structures on the

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<sup>113</sup>As I have already noted elsewhere, the progress the students demonstrated in the two courses was also likely to be influenced by their simultaneous participation in music-theory courses. The students who mostly advanced in their knowledge of analytical concepts could apparently also bring together their various sources of harmonic awareness. In the practical dimension, the music education majors' 'free piano' lessons were also likely to contribute to their learning of harmony.



keyboard. When pursuing a connection between the awareness of music that the students had developed through playing, and their analytical skills, of central importance seemed to be giving the students concepts and approaches that supported their feeling for musical gestures and motion, and helping them to avoid the mechanical or atomistic listing of the played pitches or chords.

In all, the results suggested to me that the students' use of the piano to develop their aural awareness and also to overcome its limiting perceptual tendencies could be recognised as a part of the goals of pianists' aural-skills education. If we acknowledge such a goal, the present results can be used to suggest some directions for further pedagogical development. I already noted the need to give more encouragement to the students' playing by ear in itself, without the requirement of analytical description. On the basis of my findings, those students who are more experienced in playing by ear might need encouragement to use their skill in aural-skills learning, to become more aware of their sense of directionality and meaningful musical gestures, and to learn analytical approaches by starting from musically meaningful units and expressive functions, rather than the mechanical labelling of pitches or chords. For less experienced students, in turn, the approaches of my courses basically appeared to be appropriate, although even they would certainly benefit from more attention given to musical gestures and directionality, as exemplified by Dolan's (2005) exercises. Furthermore, I would suggest that some more attention be given to the role of keyboard patterns in pianists' aural-skills education, and also point out some connections between improvisation pedagogy and aural-skills education.

I already outlined in section 3.4.3 how the patterns that the pianist can produce on the keyboard can be conceived as the pianist's tools for musical perception and thinking in many respects. The pianist's command of keyboard patterns already constrains how far the pianist is able to employ the basic process of learning music through imitation. Even though there are self-taught pianists who have learned music only by listening and imitating, and thereby develop their command of keyboard patterns, the deliberate practise of various harmonic, voice-leading and textural patterns also tends to belong to those musical traditions that expect the skill of learning by ear (section 3.4.3). The ability to produce patterns that are idiomatic to different musical styles is one type of stylistic awareness, which resides in practical action. The ability to find patterns on the keyboard that are appropriate to a particular

style means that the pianist has already connected the music to a certain context, and the pattern can be used to consciously reflect on the materials and structures of music. As already noted, the shift between production and description cannot be expected to happen smoothly and immediately. As Janne's example illustrates, however, the played patterns can also be employed as a way to trace back what it is within the musical structures that gives the impression of the music as belonging to a certain style. From the point of view of aural-skills education, therefore, the pianists' practise of various patterns on the keyboard can be thought of as an important way to develop both aural awareness and stylistic sensitivity, especially if it happens in connection to the analysis of aural models.

Even during the courses, it appeared to be a successful solution to approach harmonic study through what I have called the 'extraction–elaboration–application' tasks (section 4.2.3. and Appendix K/Lesson activities). The students extracted chord progressions and phrase-level harmonic units from compositions, transposed and figured them on the keyboard, and applied the studied harmonic concepts to the analysis of new compositions. So far, the music examples we used in such work were still somewhat limited, and focused on harmonic structures that are easy to describe by chord-degree analysis: often homophonic textures and symmetric, clearly punctuated musical structures (Appendixes I and J). With rather less pressure to proceed in traditional dictation and harmonic recognition tasks, however, it would be easier to enrich such work in the directions suggested by Pratt (1998) and Dolan (2005), for example by attending to the interplay between texture, rhythm, or polyphony. These authors suggest lots of exercises that involve the imitation of other students' solutions and comparing them with examples of repertory, which helps to reach even such dimensions in music that cannot be easily expressed with conventional symbols.

If the pianist's practice of idiomatic keyboard patterns is conceived as a way to learn aural skills, there is indeed an abundance of pedagogical resources available in various branches of keyboard musicianship. How to practice various harmonic and voice-leading patterns or small musical forms, and to improvise on them has been a topic of broad pedagogical interest from continuo practice and classical improvisation

to the pedagogy of jazz and other Afro-American musics.<sup>114</sup> What is essential for aural-skills educators, in my view, is to understand that such pedagogical tools, which have been developed with the primary purpose of supporting the performing of music, can also be used to advance pianists' aural and structural awareness of music (see also Campbell 2009). My suggestion, indeed, would be to make further use of materials that have already been created for authentic music-making and which are connected to specific stylistic contexts. A further benefit of such work would also be the possibility to advance the students' awareness of the history and cultural richness of their instrument and to integrate aural-skills learning with aspects of performance practice.

Having found that many students' main challenge in the courses was to overcome too detailed and literal thinking, and to learn to grasp harmony as patterns that might even permit some variation, I would also highlight the resources available in the pedagogy of improvisation. Numerous musicians and educators, namely, have pointed out how a central process when learning to improvise is to learn to think forward, and to listen and anticipate music as meaningful gestures, under which the details of melody, rhythm and voice-leading are subsumed (Dolan 2005, 102–106; Campbell 2009, 125–127). During the courses, we used exercises in which I gave the students a harmonic framework of a musical unit, such as a classical period, and specified the phrase lengths and cadences to be used, which the students then used as the basis for improvisation on the keyboard. Even then, such work appeared to keep the students' attention at an appropriate level of musical structures and did not involve a similar danger of over-emphasis on details as in the written tasks. A further direction would also be to devote more attention to texture or rhythmic variations in such work, whereas our work still concentrated quite strongly on the expansion of the students' harmonic vocabulary. By having the students imitate each other's textural and rhythmic solutions and even notate some of them, it would be possible to focus

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<sup>114</sup>A review of pedagogical sources that are available for the study of harmony and improvisation within the practices of continuo, jazz music or classical and romantic piano music is beyond the scope of this research. To name only a few sources, Ibberson (1983) reviews the development of the pedagogical materials for thoroughbass, harmonisation and improvisation that have been available for keyboard players from the seventeenth to the twentieth century. In my work with students for whom classical and romantic repertoires are central, texts that describe the nineteenth-century pianists' 'passage work' have been very useful; see section 2.1.2.

their attention on diverse aspects of the musical fabric, and also allow them to practice with harmonic symbols not as goals of the analysis, but as facilitators for further elaboration of the musical structures.

To further draw on the pedagogy of improvisation, it is quite a common idea that the imitation of existing music, and the invention of solutions on one's instrument, are optimally developed as two complementary directions for building the musicians' knowledge base of stylistic patterns (e.g. Clarke 1987, Dolan 2005, 122–126; Maceli 2008, 4). Whereas the two courses emphasised the dimension of imitation, the musicians' control of sound through the instrument, and their ability to imagine solutions, can also be advanced by first freely exploring musical patterns on one's instrument, and then starting to anticipate and deliberately develop those patterns that were first invented by free exploration. There is indeed a recent revival of pedagogical interest in improvisation among classical music pedagogues, which offers a range of activities and exercises that invite the students to listen and react to musical impulses through improvisation, and which also suggest how to engage the students in the exchange of musical ideas more than in my practitioner-research project.<sup>115</sup> An obvious benefit of such work for the students' aural awareness is that they need to listen to and interpret what they hear, but react to it not by literal reproduction, but by judging what is appropriate for the situation.

In general, the dialogue between my research findings and literature suggested to me that the most important question in taking full advantage of the potential of the piano in pianists' aural-skills education is to be clear about the general aims of that education and to recognise the role the piano – the students' main instrument – can occupy in fulfilling them. I feel that my participants' musical interests and their learning processes would justify the main goal of aural-skills education as being the development of the students' aural sensitivity, their ability to conceive meaningful patterns and gestures and their ability to express themselves in music, and to use notation and other symbols so as to support these broader aims. Learning to use one's

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<sup>115</sup>Some recent examples of pedagogical approaches that employ improvisation as a means of musicianship education and which have been specifically developed for classically oriented students are Brockmann (2009) and Laitz (2003). I also believe that aural-skills educators can benefit from the recent trend to build a dialogue between the practice and pedagogy of improvisation in various musical genres (see e.g. Solis & Nettle 2009).

instrument to develop one's aural skills is also, in my view, a worthwhile goal in its own right. Specific activities and skills, such as imitating music or analysing its harmonic structures, are best seen as means of pursuing the broader goals, and are therefore open to adjustment if needed.

### **8.3 Score-mediated learning**

Even more than the students' skills of playing by ear, the research suggested to me that the knowledge the students had developed through score-mediated learning of music offered possibilities that we did not manage to employ in the courses in an optimal way. After all, the score-mediated learning of music was the dominant way of pianistic work for most of the participants – a situation I had expected, but which had wider implications than what I had realised when planning the courses. By then, the 'rhythmically and texturally oriented students', who had most strictly learned music with scores, clearly faced the most difficulties in the courses. Yet they frequently demonstrated that they could analyse music and especially its harmonic structures by hearing in a somewhat general and imprecise way, which they could nevertheless not fully employ in the course activities. (See section 6.1.3). Even though these students made clear progress during the courses and also learned to solve traditional melodic writing and sight-singing tasks, it still appeared to me afterwards that the courses could have benefited them further if the goals had been more connected to their score-mediated musical awareness.

Generally, having analysed my data and compared the work in the courses with the interests the students had brought up in the interviews, I realised that there was quite a clear difference between the students' descriptions of their score-mediated learning, which focused on long-time work with particular pieces, and the conventional emphasis on the constant acquisition of new material in aural-skills courses. Except for the two students who were most familiar with playing by ear, the students' discussions about their pianistic work strongly concentrated on the long-term practice of selected pieces. Most of the students' suggestions for connections between their pianistic work and aural-skills learning concerned the deepening and enrichment of their learning of pieces, which they practised over a long period of time, and not so much the acquisition of new repertory. As I realised when analysing my data, such focus was in quite sharp contrast with the conventional emphasis on the

fluent learning of new material in aural-skills courses. In this respect, the previously referenced text by Pratt (1998) offers very welcome alternatives, since many of his exercises focus on giving the students new aural perspectives on music that they already know at some level. For the same reason, I find it worthwhile to devote some attention here to situations in which the pianist uses scores to practice music that is already familiar from previous listenings or playings – the type of work that, after all, occupied most of the students' time.

Just as with playing by ear, when playing from a score the instrument mediates the connection between the musicians' actions and the aural feedback (3.4.3). A pianist who practices a more or less familiar musical work with a score also acts and receives musical sound as feedback, but both the score and the piano mediate the connection between action and sound. Since the score and the keyboard refer to each other – each staff position corresponds to a keyboard position – the pianist can be said to be using a 'double tool' between the bodily actions and the musical sound. This 'double tool' makes the pianist's musical awareness somewhat different from the awareness involved in playing by ear: in place of 'musician → instrument → sound', there is now 'musician → (score + instrument) → sound'.<sup>116</sup>

In comparison to playing by ear, the adoption of the score to the process whereby the pianist controls sound, both opens the pianist's access to music and limits the necessity of some types of aural analysis – in ways which can very well be conceived as an occasion of the *amplification/reduction* functions, which Ihde sees as typical for technological tools (8.1). To note just a few changes, score-mediated practice enables the pianist to learn more extensive pieces and broader textures than by listening alone. The score facilitates this by working as a memory aid, and also enables the pianist to think in phrases and anticipate melodic and harmonic units that are convenient to grasp aurally, while also indicating how these units can be broken into discrete pitches. As a counterpart to the access to larger works and broader textures, playing from scores reduces the analysis-in-action that the pianist needs to do, if compared to playing by ear. The pianist no longer needs to find the right path on the keyboard by ear: some of the pitch-location demands, which a pianist who plays by ear needs to solve aurally, have been transferred to the 'double tool'. The score,

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<sup>116</sup>The graphics are adapted from Ihde (1979).

furthermore, indicates how vertical and horizontal units are broken into discrete pitches, thereby taking care of the some of the analysis that a pianist who orientates completely by ear needs to do aurally (see also section 3.4.3).

Of course, pianists have rich and widely differing approaches to score-mediated learning.<sup>117</sup> While acknowledging and appreciating the great variety, I particularly draw attention here to the somewhat passive types of harmonic and melodic awareness that seemed to be central to those of my students who had most exclusively learned music with scores. Their discussions and demonstrations suggested to me that they had a wealth of refined harmonic and melodic awareness and during their playing were able to pay sensitive attention to harmonic and melodic changes, but this awareness was of a recognitory type (e.g. Hatfield 1987). The students had not developed their awareness of harmony to such an active extent that they could think of various melodic or harmonic turns and produce them by playing. Therefore, their playing had not necessitated them to develop similar processes of cross-domain mapping as those who had been playing by ear: they could not hear harmonic and melodic changes as immediately projected onto the keyboard. I will in the following text refer to such types of harmonic and melodic awareness simply as *passive awareness*, meaning that it has not been subjected to the type of productional control that is typical for students who play by ear.

I believe that the previous general observations on the nature of score-mediated playing may bear some implications for the aural-skills education of those students who have mainly learned music with scores. First of all, I would reiterate my suggestion, already given in the previous section, that playing by ear should be recognised as an intrinsically important type of aural-skills learning and valued already in itself. I view such practice as being no less important in the case of those students who have mainly become used to score-mediated playing. If their previous experience has been very restricted to score-mediated learning, playing by ear means a qualitatively new approach to music, since they have to learn to control musical

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<sup>117</sup>Musicians' different approaches to score-mediated learning have been addressed as a part of research on musicians' practice (e.g. Jørgensen & Lehmann 1997). Hultberg (2000; 2002) has studied pianists' approaches to the score and has made a distinction between what she has called a *reproductive* and an *explorative* approach. Arho (2004, 164–165, 209–213) has discussed the different functions that scores may have in musicians' work.

pitch by orientating on the keyboard without the visual clues of a score. Even if the participants in my research who had the least experience in playing by ear needed to start with moderate musical challenges, their comments suggested that they found it highly meaningful to practise finding music they heard in their minds on the keyboard. As they reflected, the ability to guide one's hand on the keyboard by ear, and not by looking at the score, gave them a new kind of command of their instrument, which they also felt increased their technical security. Besides this qualitative new skill, it is also worth remembering that the ability to hear music and react to it by reproduction is worth developing within other musical parameters. The previously reviewed Pratt's text gives many examples of exercises in which musicians imitate musical phrases and passages and even learn to react to dynamics and micro timing (e.g. Pratt 1998, 79, 124). Such work is not likely to prevent the students who have score-dominated experience from using their previous skills, and still offers them useful practice for approaching music and their instrument through listening.

Even in the practitioner-research courses, we used types of musical activities in which the students could start from their passive awareness of harmony or melody, and then develop it towards an active control of musical pitch. In some exercises, the students started by learning the music from the score, for example by sight-singing outer voices and singing and playing them against each other, but then memorised, transposed and figured the chord progressions or outer voices.<sup>118</sup> This basic order of learning the music first from scores, but then proceeding to working by ear, offers many possibilities for further activities. The students also found it convenient in the course to recognise harmonic structures with the aid of both listening and scores, but then proceed to transpose and figure the structures by ear. Such practice led to a generalisation of knowledge that was first local, specific to a key and had a particular textural arrangement.

As an alternative to the exact reproduction of music, we also used some exercises in which the students played a harmonic reduction of a passage of music, or a reduced version of outer voices that captured the rough harmonic progression, and used them as a basis for transposition, figuration and improvisation. By playing a

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<sup>118</sup>Some examples of the work in which we started by learning the music with a score and then proceeded to playing by ear can be found in Appendix K/ Lesson activities.



reduction, a ‘skeleton’ of music and using it as a basis for figuration and transposition, the pianist comes to express one’s understanding of the most basic harmonic or contrapuntal and formal structure – and its possible elaborations. Simultaneously with my work on the present dissertation, such activities have been systematically developed by the afore-mentioned pianist and improvisation pedagogue Dolan, whose expression ‘interpretation through improvisation’ captures very well the idea of combining repertory study with aurally based keyboard skills (Dolan 2005). In our course exercises, the students first studied the score and worked out the reduction, which was then transposed and figured by ear. In Dolan’s examples, the students may also work in pairs, with one student playing passages from the score and the other one developing a reduction by ear (ibid, 122–123). In both variants, the phases that happen by ear challenge the pianists’ pitch-location skills, while the exercises as a whole develop the pianists’ structural awareness of the music, as well as their ability to find idiomatic patterns on the keyboard.

I also consider it a relevant goal of pianists’ aural-skills education to refine and sensitise the aural awareness that pianists have of the music they play from scores – even without any pitch-location requirements. In score-mediated learning, it is known that pianists may often first pursue an overall grasp of the music and play extensive pieces and textures somewhat roughly, not being able to anticipate all the harmonic changes and voice-leading patterns very sensitively (e.g. Hatfield 1987). Therefore, the pianist’s singing of various melodic and polyphonic lines alone or against each other can in itself be regarded as a type of aural-skills study. As the course participants’ cases illustrated, such practice does not require that the pianist be able to sight-sing the parts, or even require vocal fluency. Even though some of my participants had difficulties singing in tune, they found that by singing and playing lines separately or changing fingerings they might sensitise their feeling with regard to certain melodic turns or groupings. In Ihde’s terms, the participation of the human voice, and the cross-modal connection between singing and listening, *amplify* the melodic dimension in a different way from the piano.

Since students who are strongly orientated towards score-mediated learning also tend to work with technically demanding repertory, it is also worth noting the possibility to use the study of idiomatic keyboard patterns as a form of aural-skills learning, and thereby combine aural-skills learning with the constant work that the

students need to do for their instrumental technique. Some very interested reflections on the possibility to unite one's aural awareness music with instrumental technique came from the participant Elias, whose case I described in section 7.1.1, and who also saw connections between stylistic awareness and sight-reading. As he noted, the practice of idiomatic keyboard patterns in various keys and textures can provide the pianist with a way of improving one's instrumental security, while at the same time developing one's harmonic awareness and the connection between aural awareness and movement. Such practice, indeed, is not unlike the work that pianists used to do before printing techniques enabled them to purchase written-out technical studies – until which the pianists' own invention of technical studies at the keyboard was much more popular than today (Gellrich & Parncutt 1998).

In my experience, insecurity in pitch-location skills and a difficulty in following and memorising melodies in a detailed way are far from rare among pianists who have mainly learned music from scores. While conventional aural-skills tasks easily become more stressful than beneficial for such students, such activities as the playing by ear or aural transcription of music with the instrument reduce some of the conventional pitch-location demands, as the musicians can use the instrument to conceive pitch relationships. Aural analysis is still involved, however, for making sense of pitch structures such as chords, harmonic progressions and contrapuntal patterns. The musician may also combine the use of a recording with a shorthand notation such as figured-bass or lead-sheet notation when transcribing music or working out a piano arrangement, in which case the approximate notation eliminates some of the pitch-location challenges. Indeed, many of the activities that I previously suggested from the viewpoint of playing by ear are still more likely to be approachable for students with score-mediated backgrounds than traditional recognition and dictation.

To summarise, there seem to be an affluence of already existing solutions for further employing students' score-mediated knowledge and for supporting the needs of score-mediated music learning. On one hand, the ability to learn music with insight and sensitivity with a score can be understood as a worthwhile aim in itself, not requiring the students to abandon the help that they can get from the score in the location of pitch structures or texturally focused attention. On the other hand, the

score-mediated experience can provide a starting point for practice that later proceeds to playing by ear, too, if needed.

One caveat I would add is that pianists' sight-reading skills quite clearly involve challenges that are somewhat distinct from the musical aims that I have focused on here. Even though some of my participants voiced expectations on improving their score-mediated learning of music, previous literature about sight-readings suggests that fluency and security in pianists' sight reading is far more connected to the pianist's ability to coordinate the score and the keyboard motorically and visually, than to the types of skills I have been discussing here (e.g. Lehmann & McArthur 2002). While pianists' awareness of music that they read from scores can obviously be enriched by the work that I have described here, the most effective way to improve one's sight-reading performance is likely to be the specific practice of sight-reading.

#### **8.4 Implications for goals in pianists' aural-skills education**

As I described in section 3.4, my decision to include the keyboard activities in the courses was connected to my view that the most traditional approaches to aural-skills education, which I characterised as *vocal-analytical*, need complementation in order to support pianists' aural-skills learning in an optimal way. After describing my findings and relating them to further literature, it is possible to specify this critical viewpoint.

Besides the keyboard activities that I have emphasised in this chapter, during the courses I also drew on rather traditional, vocally oriented means of aural-skills education, such as vocal warm-ups, the singing of arpeggiated chords in connection to the aural analysis of them, the singing and playing of parts against each other, and sight-singing practice supported by a conscious attention to melodic scale-degrees (section 4.2.3 and Appendix K/Lesson activities). Some students obviously found these activities and viewpoints very helpful, which was most clearly visible in the positive comments on the vocal activities by the 'melodically oriented' students (6.1.2), and the learning processes with melodic work among the 'rhythmically and texturally oriented' students' (6.1.3). My findings, however, made me realise the difference between offering the vocally oriented approaches as enrichments to the students' aural awareness, and requiring the students to perform vocally oriented tasks at a specific level to pass aural-skills courses. I also became aware of how vocally

oriented practice offers many benefits that are not dependent on the pitch-location-skills conventionally connected to it.

In the traditional vocal-analytical path, it has been typical to stress pitch-location skills from the very beginning, and to rely on explicit concepts in the learning of harmony (section 2.2.1). The piano, however, even enables musicians to grasp music in several parts through practical sound-producing actions.<sup>119</sup> As I suggested in section 3.4, people have a basic capacity to learn music, or learn their mother tongue, by listening and producing similar sonic patterns: a way of learning I called ‘aural analysis in action’. Such learning engages the learner in the aural discrimination of sound and also couples the musical sound with movement and other modalities through cross-domain mapping, but does not necessarily require the ability to describe the perceived structures. On the piano, this way of learning can also cover music in several parts, which people can learn to produce even without analysing the constituent pitches. Their aural grasp of music in several parts can be strengthened by the study of keyboard patterns that are idiomatic to different musical styles, and by improvisatory activities, which deliberately guide the students to respond to harmonic situations rather than discrete pitches. Such processes are quite natural to many keyboard instrumentalists who have played by ear, but can be taken into conscious pedagogical use. Additionally, the research also suggested to me that a score-mediated experience of music involves its own characteristic types of harmonic awareness, which can be developed in an increasingly active direction.

In all, when reflecting on my results against broader literature on aural-skills learning, I view it as being logical to treat the traditional vocal-analytical model of aural-skills education, playing by ear, and playing from scores, as complementary paths to musical learning, which all offer some resources for pianists’ aural-skills education. To some extent, we already managed to employ this idea in the courses. A somewhat freer design of the specific goals and requirements that are set for the students, however, would quite obviously help the students to use and develop what are already their most natural approaches to music. Optimally, the students can be guided to sensitise and differentiate their aural perception, and develop their structural

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<sup>119</sup>The same can be said of many other instruments, such as the guitar and the accordion – a topic into which I will not venture further here.

and analytical awareness of music, by starting in ways that are congruent with their practical, productional approaches to music.

The idea of drawing on the students' existing aural awareness, and recognising various directions in which to broaden it, also requires some reconsideration of the goals and requirements that have traditionally been set for aural-skills courses. As illustrated by numerous textbooks and manuals, the arrangement of materials and challenges into progressive, sequential paths has been typical in aural-skills education (Chapter 2). However practical, this convention has easily conveyed the idea of aural-skills learning as the climbing of a ladder, where all students are expected to proceed in a single, uniform direction. The approach I have suggested in this chapter, however, rather implies that aural skills involve several dimensions, which permit the students to broaden their musicianship in several different directions. From such a perspective, the goal of aural-skills learning can hardly be conceived as a fixed point, or even as one uniform direction on an imaginary ladder. Instead, more germane to action-oriented thinking is to define the goals by considering what the students will need for skilful participation in various authentic musical activities, and also by recognising how different musicians' participation in musical activities can be very successful with different technical and perceptual skills.<sup>120</sup>

If we abandon the ladder metaphor of aural-skills learning, intermediate stages and short-time goals for the students' learning also require alternative conceptualisations. Conventionally, aural-skills educators have provided students with intermediate steps in learning by limiting the scope and complexity of the musical materials under study. This means that even students who are experienced musicians may begin with concise melodies that are composed of a few pitches. In this chapter, however, I have drawn on literature that suggests a different possibility for reducing challenges: to retain the complexity of musical materials, but to approach them in ways that allow somewhat global and imprecise types of awareness. As Ihde (1976; 2010) and other action-oriented authors suggested, people have the important ability to transform their thinking and perception through tools and technological instrument. This central cognitive capacity involves a natural trade-off between the amplification–

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<sup>120</sup>To avoid miscomprehensions, I remind the reader how the analytical description of music is also one type of social activity, which can be viewed as a educational goal (section 3.3).

reduction functions of tools: intensifying or broadening one's perception in some dimensions is connected to the temporary reduction of others. When applied to musical instruments, the positive view of *amplification–reduction* functions suggests understanding it as a possibility that the piano or other instruments can be used to reach increasingly complex textures, which may in turn temporarily reduce the pianist's awareness of detailed pitch relationships or may weaken melodic types of inner hearing. In other words, the activities and goals of pianists' aural-skills learning can be designed with special regard for the trade-off between the types of detailed pitch skills conventionally emphasised in aural-skills education, and the grasp of broader textural patterns.

Even though there is not a large amount of systematic knowledge on the paths that pianists who play by ear have used to develop their skills, quite obviously an essential possibility that learning by ear on the piano offers is to reduce pitch-location requirements, while still working with rather complex musical textures. Indeed, the recent boom of pedagogical materials for aurally oriented piano study or 'free piano' (section 2.2.5) make conscious use of this possibility. Numerous recent piano materials start by introducing pianists to some harmonic patterns, which they can use to harmonise melodies, or to learn music by ear that involves the same reduced set of chords.<sup>121</sup> The students' pitch-location demands are reduced by the possibility to try solutions on the instrument and by the limited harmonic vocabulary that is initially used. In such approaches, it is often typical to devote attention to textural and rhythmic work at the beginning, without broadening the harmonic vocabulary very quickly. This means that the students will advance in textural and rhythmic dimensions, and will still engage in aural analysis-in-action with a moderate level of pitch-location challenges. A similar path is also frequently involved, wherein students learn harmonic and voice-leading patterns in connection to figured bass and use the harmonic and voice-leading patterns for harmonisation and improvisation. Further possibilities to give priority to texture over detailed pitch location are improvisatory activities, which require the students to elaborate harmonic patterns or react to what they hear at a somewhat global level, and which involve a moderate level of pitch-

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<sup>121</sup>The pedagogical thinking behind Finnish 'free piano' education has been discussed by Rikandi (2010). Harmonic-rhythmic models have been the specific topic of interest for Elkomaa (2001).

location difficulty while guiding the pianist to interpret situations more globally (section 8.2).

I will continue in Chapter 9 with more specific suggestions on how the ways of defining requirements and setting goals could be developed on the basis of my present course design. A central question, which I will return to discuss, is how to combine listening to the students' interests with a critical, third-person view that also challenges the students' present views of musicianship and motivates them to broaden their existing skills. As the issue relates to my use of action-research methodology, I will discuss it together with a methodological evaluation of my course design.

## SUMMARY

From the action-oriented perspective to human learning, the possibility to extend one's perception and thinking through tools is a central human capacity. It would therefore be justified to give types of aural awareness that are mediated by musical instruments a more acknowledged place in aural-skills education than in the present courses. Through technological tools – or musical instruments – people have the possibility to extend their perception, which, as a counterpart, reduces some dimensions of the experience. If we take a positive view of the capacity to shift between more and less precise types of musical awareness, aural-skills education could still further employ the pianists' ability to perceive and imagine music through their instrument. The results from my practitioner-research project suggested that playing by ear and improvisation could gain an increasingly independent role in pianists' aural-skills curricula, and be developed without the necessity to immediately connect to notation or other symbols. The students' score-mediated musical experience could also be further employed, if acknowledging the types of passive melodic and harmonic awareness it seems to create. These directions of development require alternatives to the conventional vocal-analytical approach to aural-skills education, which assumes that detailed pitch-location skills be developed before the study of harmonic patterns.

## 9 Towards reflective aural-skills learning: critical viewpoints and further suggestions for the course design

I concentrated in the previous chapters on the musical aspects of my practitioner-research project. I noted how the use of keyboard work, learning journals and interviews helped me encounter my students as pianists and musicians, but also that many of the insights the students had expressed in the interviews were nevertheless not employed very far in the courses. I suggested in Chapter 8 how some of these shortcomings could be improved by broadening the concept of aural skills so as to acknowledge forms of aural awareness that are mediated by the piano, as well as imprecise and global types of aural anticipation. Besides such musical solutions, it is also possible to evaluate the research project and suggest further improvements to it from the viewpoint of the action-research methodology or action-oriented ideas of curriculum development.<sup>122</sup> A general principle in educational action research, namely, is the pursuit of a self-corrective practice, in which the participants communicate and cooperate in ways that will identify and improve elements that are critical for further development. From this perspective, the difficulty in making use of the students' insights during the courses and enabling all of them to employ their previous musical experience suggests that the self-corrective elements of the research design were not yet working optimally.

In this chapter, I will discuss and evaluate my aural-skills courses against the ideals of promoting the students' reflective learning and active participation in the curriculum, which are central for the action-research tradition inspired by Deweyan philosophy. I will also describe some analytical viewpoints that I applied to the students' learning journals and interviews, reflect on some decisions of course design, and discuss possibilities to further develop the course design I used. Having already described some of my positive results concerning the students' reflection on their

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<sup>122</sup>As I stated in Chapter 4, I decided to call my approach *practitioner research*, which I conceive as a sub-branch of *action research*. Educational ideals concerning students' reflection and involvement, however, are common in a broad range of action-research projects, and are more often connected to the term 'action research' than 'practitioner research'. I therefore also use the former term in this chapter. For action-oriented ideas regarding curriculum, see also section 3.2.2.



learning in section 6.3, I will return here to those observations that suggested the need to develop the course design.

I will focus my discussion on the two issues I consider most important to develop in the studied aural-skills courses, should similar work continue in the future. Firstly, I will discuss the need to bring the students' interests and ideas on musical development better into dialogue with the activities and approaches provided by the teacher and the curriculum (9.1). Secondly, I will consider the students' access to feedback concerning their musical skills and progress – a component I also consider to have not been very successful during the courses (9.2). To illustrate what the improvement of these issues might mean in comparison to the past courses, I will formulate an example of a developed future course design (9.3).

## **9.1 Students' musical interests and the course programme: towards a dialogue**

Discussing the students' musical interests, concerns and expectations for aural-skills learning was – aside from a positive start to our cooperation – also congruent with the ideal of promoting their reflective learning. As Dewey has pointed out, reflection arises in situations that puzzle us or call for solutions – which means that reflective learning needs to be rooted in problems that the students feel to be their own (e.g. Dewey MW 9: 162–163).<sup>123</sup> If an aural-skill course aims at supporting the students' development of skills that they will need as future professionals in music, letting them discuss their interests in a rather broad way and also rendering the notion of pianistic musicianship as problematic can be considered relevant and worthwhile. As such, however, the students' discussions were not of a type that could have provided very direct ideas for our work during the aural-skills courses. Much of the students' talk in the first interviews was rather general – quite understandably, since the methods and materials of the courses were not yet familiar to them. Some ideas and interests, furthermore, seemed to fall outside the conventional realm of aural-skills education. I

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<sup>123</sup>I referred to Dewey's notion of reflection in section 5.1.1 in connection to teacher-researchers' learning. The very same idea, however, has also been applied to students' learning. In educational action research, a common ideal is that teachers and students would participate in a shared reflective process – which is of course likely to be shaped by their different positions and knowledge bases. On various notions of reflection in connection to learning journals, see Moon (1999, 22–26).

basically found such breadth positive, but realised that we would have required some more negotiation concerning which of the students' interests were possible to pursue in the courses.

I already noted (sections 7.4 and 8.1) how I realised that my decision to stick to the traditional course requirements had limited the possibility to employ the students' pianistic musicianship in the courses.<sup>124</sup> I also suggested developing and enriching the various keyboard tasks that we used during the courses so as to engage the students' pianistic experience and help them broaden it (Chapter 8). Should we continue the course with such modifications, however, my results suggest the need to devote more attention to the dialogue between the students' initial interests and the activities and approaches offered them in the course. After all, my research process did not really involve a clear plan for developing the interests and expectations the students had expressed in the interviews into effective educational problems or tasks. After the interviews, the students still received the course programme as a rather ready-made package. Even though I sought to encourage them to find their personal approaches to learning, and to take part actively in the courses, the programme did not really require them to make choices or to plan their work, apart from minor decisions on timing their practise, or choosing some repertory for their assignments.<sup>125</sup>

My analysis of the students' learning journals was one way of clarifying how far we had gotten in supporting the students' active approach to learning. Generally, the students appeared to use their journals for different functions: for monitoring and organising their learning, recording their thoughts and feelings at different stages of the courses, and sometimes posing direct questions or suggestions to me as the teacher.<sup>126</sup> I also paid attention to how the students sometimes reflected on musicians'

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<sup>124</sup>Educational action researchers have heavily criticised curriculum planning that is based on lists of educational objectives – a convention they see as giving too simplified a view of educational aims and processes. Such criticism has been particularly common among researchers inspired by the work of Briton Lawrence Stenhouse (e.g. McKernan 2008, 70–83).

<sup>125</sup>My view that an effective dialogue between students' interests and course contents needs careful planning, has been also influenced by my experiences of teaching other aural-skills courses subsequent to the present project. Even though I have had more freedom to design goals and contents in some later courses, I have experienced that the dialogue between the students' interests and course contents requires special attention.

<sup>126</sup>On different possible purposes and functions of learning journals, see Moon (1999, 39–45).

skills by mentioning tasks or events outside the classroom, but they mostly assumed in their journals that they were working in the specific context of the aural-skills course.<sup>127</sup> My overall conclusion from this analysis was that most students understood their aural-skills learning as a personal project, but nevertheless tended to treat the contents and aims of the courses in a somewhat passive and receptive way (see also section 6.3). I also realised how the classroom set some constraints upon the students' autonomy that I had simply taken for granted, until some of the students questioned them. For example, at one point we had a discussion on the expectations that the students practise notating music without an instrument and therefore rely on the teacher's feedback, even though the instrument was readily available. At other moments, I also felt that the students expected me to give direct instructions on issues that I would rather have desired to submit to reflective discussion, such as what level of detail they should pursue when analysing harmony from their piano repertory.

Since I had listened to the tape-recorded lessons and had read the students' journals during the courses, I had already pursued a critical awareness of how I might have either encouraged or hindered the students' active participation and reflection. I had noticed moments when my lessons appeared teacher-directed, or made notes on topics which could be discussed with the students, and made an effort to use these observations when designing further lessons. I had, however, experienced a dilemma between encouraging the students' discussion in the classroom and my desire to devote the majority of the course time to music and not talking. When I returned to these reflections much later, having also considered the development of the musical activities in the courses, I started to see this dilemma in relation to the somewhat reproductive types of musical work that had still dominated the classroom work. If increasing the role of musical activities that engage the students in the musical sharing

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<sup>127</sup>As I analysed the students' learning journals, I developed a coding category for different *functions* of the students' journal writing, and another one for the *context* of the students' discussions. In the latter category, I noted instances wherein the students pointed at different contexts of music making outside of the classroom. In reverse, I also observed patterns of writing that suggested that the students understood themselves to be participating in a specific classroom practice – a game that sometimes seemed to have different rules from those that the students would follow elsewhere. See Appendix H (Coding categories).

of ideas, the verbal exchange of views would certainly be less likely to appear isolated from the musical activities of the courses or in competition with them.

In all, the analysis of the data suggested to me that in my course design, my invitation to the students to discuss and reflect on their learning had remained slightly disconnected from the content to be learned in the courses. The students had clearly conceived that their viewpoints were respected, but their ideas seemed to have remained as something that the students could add to the courses, not as an integral and indispensable part of our work. To further develop the present course design, I therefore see that the logical next step would be to present the materials and activities of the course as resources and possibilities rather than as fixed plans, and to define the goals so that they can be specified together. Linking this specification explicitly to the musical needs and interests that the students expressed in the interviews would be a good way to ensure that the students' viewpoints would really have an influence on the coursework. I will return to this suggestion in 9.3, by proposing one example of a course design in which the negotiation and specification of goals is designed so that it can be done interactively with the students.

## **9.2 Documentation, feedback and musical depth**

If desiring to build the course programme more interactively with the students and to connect it to their broader musical interests, the feedback that the students gained from their learning in the present courses quite obviously needs further development. I had concentrated on designing meaningful activities for the courses and on encouraging the students to express their viewpoints, but realised during the research process how such development also required a more careful designing of the methods of feedback and evaluation than this time. On one hand, I felt that in several instances we were too confined to the students' first-person views. On the other hand, the students described numerous experiences of tests and assessments in which the type of feedback they had received had totally passed over their own viewpoint or seemed to focus on issues that the students had felt to be rather irrelevant to their musicianship.

The confinement to the students' first-person views was a problem I particularly experienced when the students' expressed doubts on the relevance of some musical skills, which I would have desired for them to consider improving. For example, some

students appeared to me to undervalue the need to improve their memorisation skills, or the need to reach some speed and fluency in their skills when writing music down. While my view was that the students simply did not have the experience to know what they could gain by improving such skills, I did not consider it appropriate to persuade them of my opinion. At that point, however, the course design did not allow me to directly expose the students to practical situations that would have challenged their views on the discussed skills. The other extreme of totally ignoring the students' viewpoint came up when the students described their previous experiences of aural tests or classroom tasks, in which their skills had been assessed in ways in which they had no contribution, and which appeared to have had little connection to their broader engagement in music. Indeed, I experienced how we were somehow trapped between the subjectivity of the students' first-person views, and too restricted or ill focused external evidence. A critical question for further development was clearly how types of documentation and evaluation could be developed, which would enable the students to re-evaluate their first-person views, but would also target musically relevant skills and appear to the students as resources and not as something that was externally imposed upon them.

The action-oriented ideals of educating students through authentic, real-world problems also involves the idea that such activities will provide the students with rich and sufficient feedback, which enables them to actively refine their perceptions and understandings. If working on genuine, practically oriented problems, the students will naturally receive feedback from the tasks themselves: from experiencing what works, and how solutions need to be modified (McKernan 2008, 91–92; see also section 3.2). In the two courses, however, my analysis of the data afterwards made me realise that – despite my pursuit of rich and authentic classroom activities – the documentation and feedback that the students gained was actually biased towards rather reproductive tasks. While the course activities were diverse, much of the students' most personal contributions happened orally, whereas their notebooks were filled with transcription tasks that still often implied one correct or preferred type of answer – a situation I only realised, somewhat embarrassed, when I obtained the students' permission to take copies of their notes at the end of the second course. I had not planned the tape-recording of lessons or meetings so that the materials could be easily shared with the students within the limited time of our lessons and meetings.

The final test of our course, which we did in the conventional manner just as other ‘Aural skills C’ groups, also involved rather reproductive tasks, with little room for the students’ personal interpretations (Appendix I/Lesson summaries).

I have already given some suggestions for the further development of the musical activities of the course in Chapter 8. In the light of the previous criticism, the development of the musical tasks also needs to involve the enrichment of the documentation and the evaluation of the students’ work and learning processes. Indeed, when I returned to listen to the tape-recordings in which I had checked the students’ prepared musical tasks at the end of the courses, I realised that we had even in those meetings quite strongly concentrated on the students’ written transcriptions. We had also spent considerable time checking and solving problems at a rather detailed level of analysis, such as correcting local chords and bass lines. Even though the tasks involved playing the examples and transposing them by ear, these parts of the tasks had now gained less attention in our meetings than the written work, which limited the value of the tape-recordings as documents of the students’ playing. It also appeared to me that the documentation of the students’ work should have indicated to the students more clearly that their personal ideas and contributions were valued.

In his application of constructivist educational theory to aural-skills education, Buehrer (2000) suggests many ideas that I view as applicable to the further development of the course design used in this research.<sup>128</sup> His applications include performance assessment and authentic assessment – terms he sees as partially overlapping in music, and which both involve evaluating the students’ work and giving feedback to them on the basis of musical activities, which in optimal cases will remind them of real-world tasks outside classrooms (e.g. Buehrer 2000, 198–200,

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<sup>128</sup>The grading of students’ work is an additional question, which teachers also need to address when designing the modes of evaluation and feedback to be used in the courses (e.g. Buehrer 2000, 209–210). I decided, however, to exclude the criteria for numerical assessment from this discussion. On one hand, my participants did not appear to find the topic particularly central, and on the other hand, the changes I suggest to the course design would require so much redesigning of the assessment criteria, that the use of the present data to make further suggestions for grading is hardly justified. My students received a grade from the courses according to the traditional criteria used at the Sibelius Academy, which favoured those students who had strong melodic skills. Two participants who received the highest grade commented that such a grade had not really corresponded to their perception of their own skills, but otherwise the students expressed that it was most important for them to pass the courses.

205–210). He also recommends the use of portfolios, which means that the students compile a collection of documents of their coursework, and include their own reflections on their aims, goals and learning processes (ibid. 200–203, 208–210). The students may also solve some of the evaluated tasks collaboratively, or give feedback to each other (ibid. 198–199).<sup>129</sup>

The use of portfolios can in fact be regarded as a logical next step in my course design; they are akin to the use of learning journals in the two past courses, but combined with planned documentation of the students' musical work. When applying portfolio work to musical learning, there are naturally specific challenges in doing justice to the sonic and nonverbal dimensions of music. Even though notation only captures very limited dimensions of music, the development of transcription and notation tasks in an increasingly personal direction, as I suggested, would already increase their value in documenting the students' musical development. If the students notated their personal musical solutions to various open-ended tasks, for example reductions or textural elaborations, their notations would display a more personal level of thinking than the transcription tasks that they had done in the courses. Even the recording of selected musical tasks is one possibility that can, for example, enable the students to document their progress in a chosen skill.<sup>130</sup> Since the principal aim of aural-skills education is not the direct development of performing skills, however, performing selected tasks for peers and getting their feedback will, in most situations, be more likely to be an easier solution than recording, and keep the students' attention focused on processes rather than products of learning. The keyboard tasks and transcriptions that the students prepared as part of the final exam were a step in this direction, though the written tracks of them remained somewhat reproductive. Even

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<sup>129</sup>Pratt (1998, 150–152) also discusses possibilities to evaluate the students' work by basing an aural-skills course on open-ended tasks. The tasks that he suggests to be used for evaluation emphasise verbal description of music in a way that departs from my present approach (see also section 8.1), but he also suggested a 'log of experience and progress', which comes close to portfolio work.

<sup>130</sup>Buehrer's suggested portfolio tasks include computer assignments that employ MIDI technology and require the students to focus on particular layers in musical textures. Such tasks allow the recording of the students' solutions (Buehrer 2000, 208, 209). The use of tape-recordings in action-research projects that aim at the development of improvisation-based aural-skills activities for groups has been described by Bannan (2004).

the types of transcription tasks that we used could be included in portfolios in a more personal way by requiring the students to document not only the end product, but also their working processes (see also Buehrer 2000, 201, 208–209).

One central question is how much to involve the documentation and reflection process tasks and contexts outside the aural-skills classroom. As the students' interviews suggested, they found it important to reflect on their needs for aural awareness by discussing different musical contexts, such as their work in practice rooms, concert rehearsals or different teaching situations. A limitation in this research design, however, was that I had no way of positively challenging the perceptions or judgements that the students expressed in connection to those learning environments that extended beyond the classroom. The portfolios, however, can also be planned so that the students will be required to document and reflect on some of their activities outside the lessons, such as taking part in musical activities that involve some playing by ear or improvisation. The tasks wherein I asked the students to try ideas such as reduction, transposition and improvisation in their piano repertory shifted their aural-skills practice to the practice room. Such applications could be done on a regular basis, be extended to activities that involve other musicians, and be regularly reflected in their portfolios.<sup>131</sup>

### **9.3 Suggestions for improvement: a sample design for a future course**

The theoretical focus of this dissertation means that I have concentrated on principles and processes of learning, which may manifest themselves in a variety of activities and learning paths, both in formal and informal contexts. I share with many previous aural-skills researchers the view that aural-skills education needs to pursue clarity in

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<sup>131</sup>To name some examples in which aural-skills courses have consciously involved the application of practice strategies to different learning environments, the aural-skills projects developed in the Norwegian Academy of Music have extended aural-skills practice to chamber music rehearsals (Bergby 2007a). The previously mentioned book by Pratt (1998), in turn, includes numerous 'do it yourself exercises', which aim at giving students ideas on how to practice aural skills while attending orchestral rehearsals or concerts, or wherever they participate in some music-making and have a moment to develop their aural awareness. All such extensions of the learning environment can basically be followed and reflected through portfolios.



its broad aims and underlying values, whereas the design and choice of specific activities, short-time goals and requirements can be varied and applied according to different students' needs. I will nevertheless illustrate the previously discussed suggestions for further development by presenting a rough plan for a future course, which is based on the two aural-skills courses analysed in this research.

I have designed this future course for a group of students who would have the piano as their major instrument – just like my research participants – and have otherwise differing musical backgrounds and future interests. Similar to the participants in the practitioner-research project, I view it as reasonable to expect that groups of pianists will have varying degrees of experience in playing by ear, and also that their fluency in playing from scores will vary.<sup>132</sup> The most important modifications, which I suggest in comparison to the past courses, concern the enrichment of the keyboard activities, as suggested in Chapter 8, and a more developed and dynamic plan for bridging the students' musical interests to the coursework, which I discussed in the present chapter. I also suggest a refined plan for monitoring and evaluating the students' work.

I have divided my plan for the future course into three components. The first component, orientation and planning, was largely present in the first interviews, in which we discussed the students' musical interests and their work as pianists. The connection between the orientation and planning, and the practical work in the aural-skills courses, however, clearly needed development. In the suggested future course, I seek to improve this issue by planning how the students will make some choices concerning their specific goals, which will offer ways to continue the discussion and reflection on aims throughout the course.

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<sup>132</sup>An issue that would need some further discussion is how wide the variety of students' musical backgrounds can be for an aural-skills group to work effectively. Among my research participants, the difference between the performing majors who had mainly learned music from scores and the one participant who had for several years mostly played by ear or by using lead-sheet notations was already so wide, that quite often the students' different speeds made it difficult to use the classroom time effectively for everyone. I would even consider students' experience in playing by ear or score-mediated learning a more important criterion when grouping students, than performance in the traditional aural-skills tasks that have been typically used in placement tests.

The second component of my future course involves the musical activities used in lessons and given for homework, which I recommend should be developed along the lines described in Chapter 8. I suggested introducing the students to a broader choice of pianistic activities, which leads to the third component; each student's choice of some individual goals for the course, as well as evaluation and feedback that targets the students' entire learning processes. By requiring the students to choose and plan some of their tasks and specific goals, I seek to encourage them to take a more active approach to the course content than what occurred in my practitioner-research project. Enriching the methods of documentation, feedback and evaluation of the students' work is an essential part of the suggested development.

### **9.3.1 Orientation and planning**

I started the cooperation with each student in the past courses by interviewing them about their current work as pianists and musicians, their interests of development and previous experiences of aural-skills learning. I consider it important to retain this orientation phase in some form in my future course design, so as to root the teaching and learning in the students' interests and concerns, and to support their motivation for learning. Conducting a private interview is of course a type of luxury that could hardly be incorporated into regular academic courses, but similar themes can also be covered in other forms. When working with other groups of students subsequent to the practitioner-research project, I have asked the students to answer a concise, open-ended questionnaire or have given them themes to discuss in small groups.

As one alteration to the previous courses, I would suggest presenting some key principles and pedagogical ideas behind the courses openly to the students from the beginning and offering them for discussion.<sup>133</sup> In my practitioner-research courses, the idea of *flexible practice* appeared to be a principle that clarified the purpose of aural-skills learning to the students, as well as its potential benefits for their musical development (section 6.3). To restate the core idea, the students noted how musical practice that varies musical materials and expands their knowledge of idiomatic

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<sup>133</sup>The presentation of central pedagogical principles behind aural-skills learning at the very outset and allowing leeway in the design of specific activities and goals comes very close to the 'process-inquiry model for the design of curriculum', presented by McKernan (2008, 84–106), who draws on many ideas presented in the 1970s by Lawrence Stenhouse.

musical patterns refines their perception of music and meaningfully connects their first-hand exploration of materials to their study of composed music. Although the students themselves brought up this ideal, I found their discussions captured the central ideals behind my teaching so well that I would consider it worthwhile to present and discuss the ideal of flexible practice from the very beginning. This ideal is broad enough to admit various concrete choices of goals and foci, and therefore does not limit the students' choices too much.

In contrast to the analysed aural-skills courses, the future development of the course design would also need to ensure that the orientation and planning phase with the students continues after the initial discussion of their needs and interests. One way to continue the discussion more successfully is to involve the students more in decisions concerning the activities and assignments of the course – as I will suggest in the following.

### **9.3.2 Course activities**

I suggested in Chapter 8 how the musical activities I used in the practitioner-research courses could be improved in future. The underpinning idea was that pianists' aural-skills education could draw on three complementary approaches to the development of students' aural awareness. Firstly, pianists can develop their aural skills through playing by ear, projecting music onto the keyboard and improvisation – approaches that occur in informal contexts, but which can also be deliberately practised in formal education. Secondly, the score-mediated learning of music, which tends to provide pianists with implicit types of melodic and harmonic awareness, can be used as a starting point for aural-skills learning and be developed towards more active types of musical awareness. Thirdly, I consider that even the traditional vocal-analytical models of aural-skills education can also provide useful practice for pianists. (See section 8.4.)

In my practitioner-research project, the participating students' different degrees of experience in singing, playing by ear and score-mediated learning music seemed to place them in very different positions relative to the activities and aims of formal aural-skills courses. Many keyboard activities, such as playing by ear or transcribing music with the instruments, nevertheless seem to have the potential to benefit all students, if the pace and complexity of the tasks are adjusted according to each

student's needs. I will therefore summarise the suggestions I previously gave regarding different types of students (sections 8.2 and 8.3) into four principles for further development, which I expect to benefit a broad range of pianists:

1. Playing by ear deserves more encouragement, even without the requirement to connect it to notation or analytical symbols.
2. To develop their aural awareness through keyboard work, pianists' often need special support in order to grasp music in meaningful units, because the keyboard has 'latent telic inclinations' to emphasise discrete pitches and absolute pitch names. The learning of idiomatic keyboard patterns in various musical styles appeared to be central both on the basis of my findings and previous literature. The 'extraction–elaboration–application' tasks (section 4.2.3) used in the past courses were quite successful, but could become musically more diverse:
  - a. The parameters that students extract and elaborate from music examples could be more diverse and involve, for example, texture, metre, micro-timing and dynamics.
  - b. The students could connect aural-skills learning and the study of piano technique by practising idiomatic keyboard patterns, which are texturally and rhythmically more complex than in the past courses. Such practice is best suited for homework.
  - c. The students can also learn musical passages from scores and later elaborate them by ear.
  - d. Instead of very detailed used on notation and chord symbols, harmonic and voice-leading reductions of musical passages could be used more frequently. The students could be encouraged to play reductions, but also to start the analysis of music from a global level, such as the recognition of cadences and harmonic and voice-leading frameworks spanning, for example, 4 to 16 bars – both in aural and score-mediated analysis of music.
3. Improvisation can be used as a conscious tool to guide the students to anticipate musical patterns in global and hierarchical ways. Activities such as improvisation on harmonic patterns or bass lines, or call and response games between students,

require them to judge what kind of musical patterns are possible in a given musical situation – instead of literal reproduction (e.g. Dolan 2005).

4. Vocal and written aural-skills exercises could be used with pianists also in a role that supports and complements keyboard activities. Whereas traditional sight-singing and dictation tasks pose many simultaneous challenges to the students (pitch location, detailed melodic perception, notation), there are alternatives:
  - a. Pianists' use of singing to strengthen their awareness of melodic and polyphonic lines and phrasing can be regarded as useful for aural-skills learning, even without pitch location.
  - b. The transcription of music with the instrument develops the aural analysis of music with reduced pitch-location demands. Pitch-location demands are further reduced and aural analysis skills developed if using shorthand notations, such as lead-sheet or figured-bass notation, and combining them with listening to recordings in order to ascertain details of texture, voice leading or rhythmic figuration.

To exemplify how these suggestions can be incorporated into a specific course design, I suggest some modifications to the activities and use of classroom time that I employed in the practitioner-research courses. In my view, it would be possible to retain a course design that is basically similar to the present one (Appendixes I/ Lesson summaries and K/Lesson activities), but to strengthen the role of playing by ear, improvisation and instrumentally mediated aural awareness, and to support the students' grasp of musically meaningful units.

One possibility to strengthen playing by ear and improvisation in the course would be to develop the warm-up tasks that we used regularly, which involved types of playing by ear and improvisation. Organising pairs of students or the entire group in call and response games, the making of variations or imitation of each other's solutions are possible directions for further development.<sup>134</sup> Such activities provide

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<sup>134</sup>My suggestions for further development, especially those regarding the improvisation-based activities involving the students' work in pairs, are also based on my teaching of later aural-skills courses after the practitioner-research project – which I have also shared in pedagogy courses and workshops with teachers (e.g. Ilomäki 2009).

means to strengthen the students' abilities to anticipate musically meaningful units and to avoid preoccupation with details, while simultaneously supporting the exchange of musical ideas between the students.

Retaining authentic music examples and the 'extraction–elaboration–application' tasks at the core of the lessons earned much positive feedback and appears to be a solution that is worth continuing. The previously suggested enrichments to such work mean that the lesson can involve several possible starting points for the study of the music examples. Besides listening and transcribing, or listening and trying on the instrument, the students can also begin the study of music by reading the score, and then continue on to playing by ear, transposition and improvisatory work (e.g. Pratt 1998; Dolan 2005 and section 8.2). The elaboration phase, in turn, can also involve richer rhythmic and textural aspects, and if continuing to work in a piano laboratory, students' work in pairs. Any of these starting points, naturally, needs regular practice to yield improvement in the students' skills, so choices are necessary concerning which aspects each group or individual student should concentrate on.

A suggestion that I would make relative to the practitioner-research courses, too, is to devote separate time and attention to keyboard-based and improvisation-oriented activities on one hand, and the notation of music and written harmonic analyses on the other. As I described, the incorporation of playing by ear and improvisation-based work into exercises that also put pressure on the students' abilities with notation or analytical description was now quite demanding. The requirement to notate or analyse the structures in the same exercise seemed to discourage some students from fully employing the potential of playing by ear and improvisation, and trusting their sense of musically meaningful gestures. The skill of notating music, however, deserves separate attention in aural-skills education, and can be emphasised to a greater or lesser degree in accordance with the students' needs. The students' skills in notating music and ability to grasp musically meaningful patterns even in notation can be further supported by giving more attention to texture and rhythm (section 8.2).

The students' own piano repertory quite clearly deserved more attention during the courses – which some participants even suggested when evaluating the present courses. A practical solution is to shift the emphasis of the students' homework into

tasks based on their own piano repertory, which can be further employed in consequent lessons through the students' peer work. The courses exemplified some activities that appeared to be basically successful, such as the making of harmonic reductions of sections of one's piano repertory, transposing them and improvising on them. Such work would only need to become regular so as to enable the students not only to experiment but also to make progress.

As a counterpart of the suggested new elements, a component that now appeared to be quite isolated from the other course activities was the students' sight-singing practice, which was based on classical canons and choral songs. In order to strengthen the connection to the students' instrumental studies, the sight-singing practice can also be based on the singing and playing of parts from the students' piano repertory, and not necessarily on separate material.<sup>135</sup>

### **9.3.3 Choice of goals, documentation and evaluation**

An essential difference between my future course design and the past courses is that I have suggested a variety of musical activities, which obviously cannot be included in every student's regular practice. My recommendation to enrich the activities, therefore, is also connected to the plan of giving the students some choices on which specific goals to pursue. As I explained in section 8.4, I believe that instrumental students' aural-skills education could reduce certain strict requirements, wherein the students are expected to reach a specific level in perceptual and technical tasks that they are unlikely to need outside of classrooms. Instead, I would suggest making a difference between those activities and skills that will be central enough for the students to practice regularly and deliberately, with the expectation of producing evident progress, and those that the students can practise in order to add new ideas and viewpoints to their musical learning, without the requirement of the immediate

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<sup>135</sup>In my experience, the singing and playing of parts from instrumental repertory can either support the students' harmonic and analytic awareness of music, in which case the material need not be organised in a strict order of difficulty, or aim at the deliberate improvement of the students' sight-singing skills. In the latter case, I have used in some later courses, for example, the fugues from *The Well-Tempered Clavier* by J. S Bach as pianists' and accordionists' sight-singing material, which the students have practised by playing and singing parts against each other. The instruction to start from diatonic fugues and to proceed to increasingly chromatic ones provides one possibility for graded practice.

demonstration of progress during the course. A way to organise the students' choices on which skills to pursue most ambitiously, is to require that each student present a plan for their portfolios after the introductory period of the course – at a stage when they already have some experience of the contents of the course, and their individual needs. Such plans can be one way of focusing the portfolio work on the students' learning processes and not only on the results.

## SUMMARY

The interviews at the beginning of the practitioner-research courses enabled the students to relate their aural-skills learning expectations to their broader interests of musical development. The activities and requirements of the courses, however, did not really include the students in decisions, which meant that the beginning interviews and the work in the courses were somewhat disconnected. I therefore suggest a future course design, which is based on the two aural-skills courses, but modified so that the students are presented with a broader range of activities and possible goals, but required to choose some of their individual goals and tasks. The suggested course design also involves richer ways to document and evaluate the students' work and progress than in the past courses, by using portfolios and by increasing the role of open-ended musical tasks. These suggestions are also congruent with the suggestions given in Chapter 8 for giving a larger role to the students' instrumentally mediated awareness of music: an awareness of music that is connected to the piano.



## **10 Reflections and implications**

In this dissertation, I have moved between my own work as an aural-skills teacher and the broader field of research and practice of aural-skills education. In the practitioner-research part, I sought to relate aural-skills education to twelve pianists' broader goals, interests and learning processes in music, followed their learning processes, but also discovered that aural-skills education could still better interact with the types of musical awareness that were central to their pianistic work. In the theoretical part, in turn, I proposed that aural skills can be conceived on the basis of *action-oriented* educational theory, which I view as helpful in relating aural-skills education to students' broader engagement and learning processes in music.

In this last chapter, I will first draw together some of my results and theoretical viewpoints and relate them to some broader international discussion and previous literature (10.1). I will proceed to discuss some educational implications and topics, as well as directions for further research (10.2–10.3), and conclude with some methodological reflections (10.4).

### **10.1 Action-oriented view of aural skills: bridging educational theory and teachers' knowledge**

I began my practitioner-research project in Finland motivated by interests and concerns that have also been the topic of discussion internationally (Chapter 2). While aural-skills pedagogy has an established tradition with a set of widely used activities and pedagogical practices, more and more pedagogues have recently raised critical discussion on future musicians' needs regarding aural skills and turned their interest into improvisation, the use of students' instruments, and musical tasks that are open-ended and call for the students' personal contribution. Several aural-skills researchers have also recently drawn on constructivist educational theory and have urged a shift from attempts to deliver prescribed contents to supporting students' problem solving and personal construction of meaning.

With the present research, I have sought to contribute to the discussion that strives to critically develop aural-skills education and reflect on its role in supporting the students' comprehensive musical development. While I share the viewpoint of

those aural-skills researchers who subscribe to constructivist educational theory, I also consider it important to connect such applications of general educational research with musicians' specific pedagogical and practical tradition. While the constructivists' emphasis on the meaning-derived, cultural and contextual nature of human learning is much needed in aural-skills education, aural-skills teachers also need to understand how such dimensions of learning manifest in the largely nonverbal processes whereby musicians work with musical sound. For this reason, I have sought to relate recent cognitive and educational literature to the specific tradition of aural-skills pedagogy, which has provided aural-skills educators with activities and pedagogical concepts for the development of their students' awareness and mental control of musical sound.

The concept of aural skills, which I have proposed in this research, draws on what I have called an *action-oriented* perspective to human learning (Chapter 3). A central idea is that the people constantly form habit and attune their body and mind to the environment as they act in the world – or actually attune their unified body-mind, in which the bodily and mental aspects of learning cannot be separated. In music, the habits whereby people learn to produce musical sound also attune musicians to different dimensions of music: they tend to develop different 'hearings' of music through their different habits of sound production. This view evidently leads to the idea that there are numerous types of 'inner hearing' of music, and also numerous ways of giving musical meaning to notation or other symbols. A further consequence is that all skills, even skills like imagining how notated music sounds, are highly active and interpretive. As I suggested, these viewpoints on musical learning give further support to the recent trend of conceiving the contents of aural-skills education as open, dynamic and negotiable, as well as to the trend of involving the students' own instruments and favouring open-ended and contextual musical tasks.

Discussions with teachers and musicians have often given me the impression that many teachers who work with young musicians are aware of the need to encounter students as embodied beings, who have attuned themselves to musical sound in different ways. In my experience, the tight connection between bodily action and students' perception and imagery of music is an integral part of the daily practice of instrumental teachers, and the connection has also been discussed in philosophy of music education (section 3.3). The research and pedagogy of aural-skills education, however, has rarely articulated the role of embodiment and habits of music production

in connection to musicians' aural awareness outside of specific aural-skills methods. Thorough discussions of the relationship between the students' informal aural skills development and the contents and methods of formal aural-skills education have been especially absent. Aural-skills educators' have also faced the limiting tendencies of practical conditions such as large groups and tight schedules, and have also been constrained by rigid conventions of assessment – which complicate the teachers' possibilities to support the students' personal musicianship and to convey an idea of aural skills as a rich and personal topic. I therefore maintain that aural-skills education is very much in need of further research and conceptual tools that recognise the connection between musicians' aural awareness and their production-derived habits, and that also help teachers to articulate their practically derived experiences and to relate them with research-based knowledge.

Aural-skills education, indeed, seems to be a case in point of how the effective development of educational practice often needs to target both practical actions in classrooms and the discussions and conceptualisations that guide teachers' work in different ways. In my view, the difficulty in recognising the contextual nature of musicians' aural awareness is a problem that is connected both to the practical habits of organising aural-skills education in musical institutions and to the types of propositional knowledge that have become influential in the field. When seeking to promote alternative perspectives, therefore, there is the need to develop the complex layers of professional, personal and discipline-based knowledge, which are involved in aural-skills educators' work. As Michael Bassey (1999, 48–51) has expressed, the possibility for research to support educational development requires that it manages to contribute to teachers' *professional discourse*, which in turn can develop teachers' *craft knowledge of teaching*.<sup>136</sup>

In my main practitioner-research project, I realised the need to find ways of talking about aural skills with students, so as to focus on action, and to specify and further develop ideas on how students could develop their aural awareness. As the students' interviews revealed, the ways in which aural skills were often tested in

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<sup>136</sup>Bassey (1999) has adopted his definition of teachers' craft knowledge of teaching from Brown and McIntyre (1993, 17). For more literature on different layers of knowledge involved in teachers' work, see also section 5.1.1.

institutions or portrayed in common talk were not very congruent with the contextual and dynamic picture that I sought to convey. My research participants, however, helped me forward in verbalising my pedagogical ideas when they described their meaningful learning experiences. In particular, they brought up the usefulness of varying and exploring the musical patterns and structures under study and developing alternative solutions to musical situations. Such work, which I have called *flexible practice*, appeared to be the essential element in the students' most meaningful aural-skills learning experiences: the kind of study that made musical structures and relationships tangible to them and also brought about perceptual development. As I realised, by paying attention to such practice, the students had formulated a principle that can be found behind many types of aural-skills practice. The work with the students suggested, however, that it was important for them to practically experience and discuss with the teacher and the group how aural-skills practice was related to their previous habits, and how they felt it was changing their aural awareness.

The results also suggested to me the need to further develop how goals are set in aural-skills education, so as to accommodate the perceptual tendencies and development requirements that were related to the students' different musical backgrounds. A central topic that I would also recommend be developed and studied further is that of giving more recognition to the students' *instrumentally mediated aural awareness*: the ability to perceive, anticipate and conceptualise music through their instrument. I will discuss these topics further in the following sections, in connection to future research and pedagogical development.

## **10.2 Pedagogical implications: a process approach to aural-skills curriculum**

My practitioner-research project involved pianists with very different backgrounds, and illustrated how they went through very different learning processes, even though they participated in the same lessons and activities. The students' previous experiences in singing, playing by ear and playing from scores seemed to make a difference regarding what kind of aural-skills practice most benefitted them – a situation that suggested to me that freer course goals would make it easier to respond to the students' needs. I also consider the students' use of their instrument to develop

their aural awareness as deserving an acknowledged place as a goal of aural-skills education – even more than what we had managed to accomplish in the present project. These kinds of ideas for further improvement, however, mean diversifying the possible contents of aural-skills courses in a way that is not very compatible with the convention of setting course goals, which involves describing a list of technical skills or exam requirements that the students are to attain. This became evident in my practitioner-research project, in which my decision to retain a set of traditional course requirements clearly turned out to be a limitation. The controversy that I experienced was also useful for the research in a way, since it helped me to articulate the difference between the traditional view of goals, and what would be justified from the action-oriented viewpoint.

The development of aural-skills educational goals, so as to enable students with different backgrounds to build on their previous knowledge and to recognise their strengths, remains the logical next step that still merits attention, if the work initiated by the present practitioner-research project were to continue. This type of direction for curriculum development can also be connected to broader educational discussion. The convention of requiring students to reach a set of precisely listed behavioural outcomes and letting such lists provide the basis of curriculum design has been a topic of frequent criticism in educational research. For the present project, I believe it is particularly useful to consider the criticism voiced amongst educational action researchers who draw on the work of Lawrence Stenhouse. His central tenet is that the curriculum should be conceived as a hypothesis in terms of what kinds of contents are worthwhile and feasible to support the students' holistic learning and growth – a hypothesis that must be constantly monitored and evaluated by both teachers' and students (Stenhouse 1989, 70–71; McKernan 2008, 6). He speaks in favour of what he calls a *process model of curriculum development*, in which the students' skill of critically developing their knowledge and understanding are viewed as more important than specific contents, and in which the educators' clarification and pursuit of educational values inherent in the processes of teaching and learning are more important than specific lists of contents (Stenhouse 1989, 83–90; see also McKernan

2008, 3).<sup>137</sup> Stenhouse's viewpoints appear as very pertinent to aural-skills education, especially if its role is understood as supporting the students' comprehensive development into future musicians, whose challenges no one can ever precisely foretell.<sup>138</sup>

The need to view curricula dynamically and to emphasise processes rather than fixed prescription lists can also be defended on the basis of the mainly nonverbal and highly contextual nature of aural skills. The literature that I have cited in this research suggests that even musical tasks that may appear to have a single correct answer – for example, writing a dictation exercise – involve highly interpretive work and perceptual nuances that cannot be reduced to responses such as a notated answer. Many perceptual processes in music, furthermore, are outside the reach of people's conscious control. For example, the research participants who learned to perceive different expressive functions of tonal harmonies, or those who learned to perceive melodies in a new way, seemed to experience the process as a subtle 'attuning' or 'retuning' of their musical awareness to new dimensions – rather than something that could be fully controlled by conscious decisions. The research data also exemplified how the students recognised different learning environments, as well as their own intentions and moods, as participating in this kind of perceptual tuning. For all these reasons, it is very likely that students in the aural-skills classroom may learn to solve musical tasks differently from what they would do in authentic contexts of music

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<sup>137</sup>Various ways to conceptualise the curriculum are topics too broad to be exhaustively discussed here. Jorgensen (2002) maps various conceptions, or as she calls them, 'images of curriculum', with special regard for music education. Her list of images comprises *curriculum as instructional content*, *system*, *process*, *realm of meaning* and *discourse*. In her view, no single image of curriculum will provide a sufficient basis for understanding teaching and learning, but the different images should be conceived as dialectical. To relate the present view to Jorgensen's analysis, I maintain that the process image of curriculum in particular deserves attention in aural-skills education, and the field would generally benefit from several possible and dialectical images of curriculum, whereas the image of *curriculum as instructional content* has dominated the field for a long time.

<sup>138</sup>For recent discussion on musicians' changing needs and their implications for formal education, see e.g. the recent collection of articles edited by Sam Leong (2003). The articles recurrently note how the teaching and learning of specific contents and skills need to be informed by an awareness of such broad questions as musicians' changing prospects of employment and their need to take an active role in the society, as well as recent trends towards the interaction between different musical genres.

making – a problem that many of the present participants had recognised. Aural-skills education, indeed, seems to be particularly vulnerable to the typical problem wherein formal education produces learning that only works in a school context (e.g. Lave & Wenger 1991, 99; regarding aural skills, see also Gartenlaub 1999, 310–311).

Even if formal aural-skills education manages to stay close to skills that are relevant for authentic music making, there is a further reason to be sceptical about determining goals by setting fixed lists for the skills that the students should attain. Namely, the action-oriented literature that I have reviewed in this research does not seem to support the idea that different students would unequivocally benefit from developing exactly similar perceptual or technical skills in music. Rather, as conceived by Dewey and other action-oriented authors, learning is an adaptation process, wherein the optimal knowledge and skills are those that empower the learner to participate in relevant tasks and activities (Dewey MW 12, 130). The same idea is also central in more recent cognitive literature, which I have cited in section 3.2.1: people's perceptual development does not happen through the storage of knowledge or skills for their own sake, but as an interactive process, wherein the optimal goal is skilful coping with whatever demands are set by the environment. When applied to aural-skills learning, this view suggests that the optimal goals for the development of musicians' perceptual skills are those which best support the musician in meeting the demands that are set in various activities and contexts of musical action. Students with different inclinations may succeed by different means.

The view that educational goals should empower students to participate in music does not mean a narrow utilitarian view of musicianship, but rather suggests that what kinds of perceptual and technical skills best benefit musicians is determined through what supports the students in meeting broader musical values. For example, the research participants discussed their need to perform music sensitively and insightfully and to develop a personal way of drawing on the musical tradition – musical goals and values, which in optimal cases could also cover and direct the participants' learning of aural skills.

### **10.3 Specific topics for further research**

Aside from the previous broad pedagogical implications, I consider it worthwhile to suggest some more specific topics of research and pedagogical development, based on

my practitioner-research project and the action-oriented concept of aural skills. On one hand, the idea that aural skills are shaped by habits of music production has implications for different instrumentalists, as well as interconnections between instrumental pedagogy and aural-skills education. On the other hand, the ideals of fostering the students' flexible practice in music, favouring open-ended musical tasks and developing aural-skills curricula in a reflective direction all deserve further research and pedagogical development.

As I described in Chapters 2 and 3, a large body of cognitive and educational research supports the idea that musicians' bodily habits influence their perceptual skills, but this connection has received little attention in previous aural-skills research. In the present project, my participants' aural-skills learning and their background in singing, playing by ear and playing from scores appeared to be connected, but since my data was largely based on the students' first-person views, such connections need further research. On the basis of my teaching experience and discussions with instrumental pedagogues, the connections between musicians' bodily habits of music production and their perceptual and analytical skills also merit further research, which addresses singers', brass students', and generally different instrumentalists' specific perceptual tendencies and needs for aural-skills learning.<sup>139</sup> My formulation of an action-oriented interpretation of the different sub-skills typically cultivated in aural-skills pedagogy (section 3.4) was to provide a framework, which can be used to map interconnections between action and perception, and perceptual tendencies that are typical for different instruments. For example, the human voice as an instrument does not project pitch relationships into any visible form outside the musician's body, which in my experience has clear implications for singers' education.

The recognition of bodily habits behind aural skills makes it possible to study, for example, how musicians' production-derived habits converge or conflict with the analytical tools with which musicians learn in music-theory subjects. For example, some of the present participants found scale-degree thinking very awkward until they gained some experience in transposition – a practical activity that was congruent with the symbolic approach. In my view, such acknowledgement of the interconnectedness

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<sup>139</sup>On pedagogical projects on singers' and brass students' aural-skills learning, see e.g. Iilomäki & Järvelä (2009) and Becker-Gruvstedt (2009).



of concrete habits and the students' aural and structural awareness is also a way to overcome the common dichotomies between technique and musicianship, or theory and practice, which easily appear in everyday talk concerning musicians' skills and learning. For example, my research participants' cases illustrated how it was possible to find activities that the students felt simultaneously contributed to both their technical command of their instrument and their aural and structural awareness of music. With my pianist participants, connecting aural-skills learning to the study of various styles and traditions of keyboard musicianship, such as figured bass and the classical tradition of improvisation, appeared to be another direction of development that would better integrate the students' instrumental studies and their aural-skills learning.

The practically oriented teaching of aural skills and the ideal of promoting the students' flexible practice of music quite obviously require pedagogical skills from teachers, which makes further research on pedagogical applications and possible learning paths indispensable. Achieving tangible results in aural skills is also time-consuming, particularly if students need to 'attune' their perception so that they will learn to perceive new dimensions and patterns in music. Furthermore, there is no such a thing as a general improvisation skill, but even practically oriented approaches to aural-skills education are highly contextual and likely to develop particular dimensions of musical awareness. The time-consuming and constrained nature of aural-skills learning naturally warrants critical questions concerning the use of students' and teachers' limited time. One central topic of further research I would suggest on the basis of the present project is the possibility to find alternative paths to the traditional *vocal-analytical* approach to aural-skills education, in which students are first taught to read and write concise melodies, and are gradually led towards increasingly complex textures (sections 3.4.3 and 8.4). As I suggested, many students appear to develop their aural skills through activities such as the aural transcription of music with an instrument, which involve rather complex musical textures, even before they have secure pitch-location skills (section 8.4). Future study on how various musicians learn through such alternative paths, along with the development of pedagogical applications, would be very revealing. Post-tonal music, as well as rhythmical challenges that are more complex than those involved in the present

project, would also need to be included in such research and pedagogical development.

Finally, how to design various specific aural-skills courses, which can be adjusted to students' individual needs and which support their reflective and self-directed learning, continue to offer topics for further research. The refined model for pianists' aural-skills course, which I sketched in section 9.3, provides one possible approach, which can also be used for further research. By suggesting how the students could take further responsibility for the documentation of their learning, I sought to get close to the ideals of a joint inquiry process with the students (see Chapter 4). The practical demands are likely to be different from the present project, however, if such a course design is used with large numbers of students such as those who regularly attend aural-skills courses in institutes of higher education. The adaptation of the contents to the needs of different instruments will be a topic of curriculum development.

#### **10.4 Methodological reflections**

As frequently noted in qualitative research literature, the researcher needs to care about the ethics and quality of one's project not only when gathering data, but throughout the entire research process: in the thematisation and conceptualisation of the topic under study, in interacting with research participants and in the interpretation of data and dissemination of the results (e.g. Bresler 1996; Guillemin & Gilliam 2004; Bresler & Stake 2006, 297; Kvale & Brinkmann 2009, 74–78). The recognition that all research is necessarily shaped by the researcher's perspective has recently shifted the emphasis in methodological discussions into such criteria as the researcher's ability to portray the studied practice in its complexity, to do justice to different participants' perspectives and to capture aspects that are relevant to further development (e.g. Heikkinen, Huttunen & Syrjälä 2007). I therefore consider it worthwhile to conclude this research with some reflections on the way in which I have thematised and portrayed aural skills as an educational subject and research topic.<sup>140</sup>

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<sup>140</sup>Regarding methodological issues in connection to data-gathering, see section 5.3.

Since I have frequently applied educational literature outside of music in this research, some remarks are worthwhile concerning the relationship between reflective learning as a popular educational ideal, and the tradition of fostering sequential skill development in music. The educational ideal of rooting students' learning in problems, which will prompt the students' reflection, is of course quite different from the long tradition of aural-skills education that has trusted carefully organised sequential materials and progressive exercises. With the present research, I have sought to cast critical light on the apparently objective status that such materials and sequential approaches often seem to have gained, and to suggest that they are much more accessible to some students than others, and even more relevant to some students' broader musical engagement than others'. My data also suggested that students who enter higher education felt the need to reflect on their musical goals and ideals and to acquire a more conscious and personal approach to the learning of music, which seems to be a good occasion for discussing the role of aural skills in their broader musical development and possible approaches to aural-skills learning. Nevertheless, I conceive the present research as a complementary rather than alternative perspective to the tradition of sequential skill development.

The selection of the present participants is of course likely to emphasise reflective learning and problem solving, since the groups included several students whose problematic background with aural skills made it necessary for them to consciously search for tools for their learning, and also those students who participated owing to a special interest in reflection on their aural-skills learning. Worth remembering, too, was that of all pianist students in the age group, the most fluent students in traditional measures of aural skills came to be excluded from the present project, since they could pass the level test and were not required to take the 'Aural skills C' course (sections 4.2.1–4.2.2). Nevertheless, the suggestions that I gave requiring the students to make choices regarding some of their specific goals and to document their learning are not necessarily in contrast with the possibility that students may also work on selected musical skills according to the sequential way, which has been typical for aural-skills pedagogy. Indeed, the concept of reflection-in-action by Schön (1983, section 3.2.1), or the Deweyan notion of broad and self-corrective habits (section 6.3), are ways of explaining how human skills can at the

same time be mainly nonverbal and based on bodily experience, and yet involve the actor's reflective and self-corrective thought.

I also maintain that giving a trustworthy picture of aural skills as a research topic requires addressing many students' experiences of frustration and failure, which have also been frequently brought up in connection to the subject. The aural-skills researcher, indeed, needs to take seriously those recent methodological discussions that suggest that ethically sustainable research should also address problematic issues if they are central to the topic and essential for understanding and developing it (e.g. Zeni 2009, 259). For a practitioner researcher especially, not addressing problems is also a choice, which at worst can contribute to the preservation of unjust conditions, unbalanced power relations or conceptions that have been accepted as the status quo (Fox, Martin & Green 2007, 38). The very reason why I chose to highlight some students' backgrounds as appearing more compatible with traditional aural-skills methods than others', was to draw attention to the ethical aspects connected to the role of aural skills as a compulsory subject, which contributes to students' access to schools, and very likely also to students' perceptions of their own musicianship.

As I argued, musicians' attunement to hearing different aspects of music, such as their ability to remember melodies in a detailed way, is a process far more extended in time and place than the formal courses that students go through. This means that students' possibilities to succeed in aural-skills courses are dependent upon influences and circumstances that they cannot choose. Similarly, however, I needed to note in this research how my own approaches were still more accessible for some students than others. Indeed, I maintain that the common educational rhetoric about 'supporting' students' learning should not obscure the educators' exercise of power when they design curricular goals and contents. In the spirit of action research, I therefore suggested that the specific goals that are pursued at different stages of aural-skills education be designed interactively with the students. When future musicianship cannot be precisely known, the best option is to support the students' adaptability, and to empower them to make informed decisions.

To note a further limitation of the present research, my choice to thematise even the music education students as pianists naturally does not do justice to the issue of what needs the students' work as music educators will bring to their aural-skills learning. While I view the students' instrumental background as an aspect that also

supports their work and identity as educators, my framing of the research task still necessitated the exclusion of many relevant issues related to music educators' professional needs, which deserve their own research.

In all, the central implication of the action-oriented concept of aural skills, which I have pursued in this research, is that there is not likely to be aural-skills education that would be equally useful for all students, regardless of their personal and cultural backgrounds or their future needs as musicians. Instead, meaningful aural-skills learning needs to connect to the students' previous – as well as their future – musicianship. Since both of these are highly complex, I consider it the most responsible solution to view aural-skills curricula as hypotheses of what is meaningful to teach and learn. The development of activities and contents that will best support different kinds of students' aural development is, in my view, best seen as an on-going project, which requires interaction between students and teachers, and also benefits from the interaction of teachers and researchers in various areas of expertise.

## **Glossary**

The following list specifies my usage of terms that recur in several chapters of this dissertation, as well as some expressions I coined for this research to describe musicians' activities or skills. I also provide references for the book sections that discuss the terms and provide references for the literature. The arrow (→) refers to other terms defined in the glossary, italics note terms that have not been listed as separate entries.

### **Action cycle**

Action-researchers are commonly advised to organise their research so that phases of practical action alternate with phases that involve the analysis of data, clarification of ideas and planning of further action (Chapter 5).

### **Action-oriented theories**

The perspective of this research is based on cognitive and educational theories that hold three basic principles (section 3.1). Firstly, they maintain that the human body and mind are tightly interconnected: basic habits and patterns of bodily action shape even abstract perception and thinking. Secondly, they view the functioning of the human mind, the individual person and the learning environment as tightly interconnected. People employ resources in their action and thought that have social and cultural origins, but which can be internalised so as to facilitate individual thinking, for example, language and other symbols, tools and gestures. In turn, people externalise the products of their thinking into external artefacts, symbols and technological tools. Thirdly, action-oriented theories consider that perception and thinking are constantly shaped by the possibilities of action that a person assumes in each situation. This means that perception and thinking are always related to some, often implicit, intentions to act. Action, in this context, can be concrete or mental.

### **Action research**

Action research is an umbrella term for a large variety of research strategies, which simultaneously develop a certain practice and study it, and in which the researcher is a participant in the studied activity (Chapter 4). *Practitioner research* is a particular

type of action research in which the researcher studies and develops one's own practice.

### **Aural analysis in action**

I coined the expression for the type of practical analysis involved when musicians aurally imitate music or play music from memory (section 3.4.1). If people hear music or recall previously familiar music and play it without visual or kinaesthetic cues, such activity may require quite complex aural analysis, which nevertheless only becomes conscious though its results in action. The expression connotes Donald Schön's terms *thinking-in-action* and *reflection-in-action* (section 3.2.1).

### **Aural awareness**

In this research, the term 'aural awareness' refers to different ways in which people perceive and experience music aurally in connection to their musical activities. Aural awareness involves skills and types of experience that can be developed and that are subject to similar principles of learning to those that I describe in this dissertation – but which tend to be more diverse than what can be included in → aural skills as a subject of formal education. *Musical awareness* is a closely related term; aural awareness merely puts more emphasis on the hearing, listening or aural imagination of music.

### **Aural imitation → playing by ear**

### **Aural skills**

In this research, aural skills refers to the subject of formal education, which was largely shaped in nineteenth-century conservatories. I conceive the term to include subjects that bear such various titles as *ear training*, *aural training*, *Hörerziehung*, *Gehörbildung* or *Solfège* (section 2.1.1). I also refer in this research to the students' *broader engagement in music*, whereby I mean whatever they do in music outside formal aural-skills courses, whether informally or in other music subjects in formal education.

### **Authentic musical activities / authentic musical examples**

In this research, authentic denotes musical or other activities that are not only constructed for educational purposes, but which people pursue for their own sake. Similarly, authentic musical examples refer to 'real music' that has been composed (or improvised) in order to be performed and listened to and not only intended as an aural-skills exercise. Naturally, there is no strict border between authentic and inauthentic, as many socially respected activities may also have more or less explicit educational purposes.

### **Broader engagement in music → formal education**

#### **Conceptual metaphors**

The principle that people experience abstract entities and ideas in terms of other, more concrete domains of experience. For example, when talking about 'raising standards' of musical excellence, people conceive the abstract entity of excellence by comparing it to physical height. (Section 3.1.3.)

#### **Constructivism**

In the context of educational research, constructivism refers to various theories of human learning that emphasise the idea that people actively construct their knowledge (section 2.2.3).

#### **Cross-domain mapping**

Conceiving a domain of experience in terms of another one; a process employed in → conceptual metaphors. For example, abstract ideas can be conceived as being 'closely related', which means that the domain of physical distance is mapped with some abstract qualities of the ideas. In music, pitch is commonly mapped with physical height.

#### **Curriculum**

The term curriculum is commonly used to denote the contents and substance of formal education: what is taught and learned. The concept, however, is highly complex and much debated, and is also a broad and diverse research topic. The



frequent usage of the term for simple listings of concepts or skills that a course or educational programme should cover has raised heavy criticism among educators and researchers who emphasise the importance of educational processes. (Section 10.2.) I refer to such listings as *course requirements*.

### **Description-based → production-based**

#### **Dictation**

I use the term dictation in this research in the restricted sense for the typical activity in formal aural-skills education, which involves notating music that is heard without an instrument, either in one or several parts. In informal contexts, musicians frequently engage in similar activities, which, however, may involve the use of one's instrument, or the use of shorthand notations that provide some information but need complementation. I refer to such activities that are more practically oriented and less strictly defined than conventional dictations as *aural transcription of music*.

#### **Formal education**

Education within formal institutions according to explicit → curricula. (For various definitions, see Folkestad 2006.) The relationship between formal education and students' informal learning practices in music has recently been the topic of vivid discussion (Green 2002, 177–178). In this research, I am mainly interested in the relationship between formal aural-skills education and the students' *broader engagement in music*. The latter includes both the students' informal activities in music and their studies in other formal subjects than aural skills, including instrumental studies and other → music-theory subjects.

#### **Free piano**

A component of piano education at various levels that involves playing by ear, playing from songbook chord symbols, the learning of accompaniment patterns in various popular styles, and to varying degrees, improvisation and transposing. In an international regard, the 'free piano' courses in Finland and Scandinavia have similarities with *keyboard skills* or *keyboard harmony* in some countries, but are often oriented towards popular music styles and are rather free in terms of voice-leading

(Rikandi 2010). ‘Free piano’ gained an official place in Finnish music schools in the 2000s. It is offered as an elective subject, and to some degree also integrated into regular piano lessons, especially at the elementary level. The Sibelius Academy Guide for Foreign students also applies the terms ‘free accompaniment’ (for music education majors) and ‘keyboard harmony’ (a course with a more classical orientation offered to performance majors).

### **Fundamentals of music**

The compulsory unit of aural skills, rudiments of music theory and music history, which is part of the curriculum of the Finnish music schools that follow the *extended syllabus of basic education in the arts* (Appendix A/Aural-skills education in Finland). ‘Fundamentals of music’ is my literal translation of the Finnish term ‘musiikin perusteet’, which has been used since the latest curriculum reform in 2002.

### **Habit**

In the philosophy of John Dewey, habits occupy a central cognitive role – an idea that Dewey owes to Charles Peirce. By developing habits – recurring patterns of action – people learn to anticipate forthcoming events and conditions, and consequences to their actions. This ability is cognitively important, since it means that people are able to think about future events or potential situations that are not concretely present, and to generalise from experience. This central cognitive function, therefore, is in Peirce’s and Dewey’s philosophies not based on propositional thought, but on action. This also means the notion of habit does not only refer to blind or routine action. Instead, Dewey discusses how people can develop their habits towards heightened adaptability, which has also been a central thought for the methodology of → action research.

### **‘Hearing’**

In quotation marks, I use ‘hearing’ to refer to usages in which people’s aural awareness has been connected with another domain of experience; for example, when melodies have been → projected onto the keyboard. Musicians commonly express how they ‘hear’ intervals, and actually see and feel them on the keyboard. Such ‘hearing’ involves the process called → cross-domain mapping.

### **Higher education in music**

Education intended for aspiring music professionals, usually occurring in academies, universities, colleges or conservatories.

### **'Inner hearing' of music**

Music-education and aural-skills literature use the term 'inner hearing' 1. broadly to denote the ability to mentally anticipate music that is not present, and 2. in a more restricted sense for the ability to anticipate how notated music should sound (section 2.2.1). From the → action-oriented perspective, both the broad and restricted meaning can be conceived as being based on the ability to anticipate music production (section 3.4.1). My use of quotation marks implies the idea that the skills of 'inner hearing' also involves other sensory modalities (→ 'Hearing').

### **Instrumentally mediated musical awareness**

Experiencing music in connection to playing an instrument or in ways that more or less consciously involve anticipated actions on an instrument (Chapter 8). I reserve the word *instrument* to musical instruments in this research, and use the word *tool* for nonmusical activities.

### **Internalisation**

It is generally acknowledged that people can learn to perform activities and operations → mentally that were first performed in a visible and socially shared way (section 3.1.2). From the → action-oriented perspective, the basis of internalisation is people's learning to anticipate responses to actions. In reverse, people can externalise their knowledge into artefacts, tools, or language and other types of communication.

### **Learning environment**

From the → action-oriented viewpoint, human learning is based on the interaction between the learner and the environment. People learn by taking part in socially situated activities and by employing materials, tools and symbols provided by the environment. By learning environment, I refer to the totality of those means and conditions that are involved in a person's learning.

### **Meaning (pragmatist definition)**

According to the naturalist pragmatism of Charles Peirce and John Dewey, meanings are based on habits. The capacity of signs, objects, tools or gestures to convey meanings is therefore based on the habits of use in which they are involved in a human community (section 3.1.1). This principle is of special relevance for research on music, since it assumes that the power of symbols or expressions to be meaningful does not rely on propositional thought, but is instead based on human action and social practices.

### **Meaningful (learning, experiences)**

I refer to learning or experiences as meaningful when they involve the learner's personal contribution, are related to goals that the learner perceives as relevant, and bring a sense of satisfaction to the learner. Meaningful learning is sometimes used as the opposite for rote learning, thereby also emphasising the learner's active role.

### **Mental control / hearing / projection**

Processes or skills that occur without externally visible or audible action. Musicians may *hear music mentally*: imagine musical sound without external action, or *mentally control* their musical imagery: voluntarily shape and activate images. They may also *mentally project* music onto the keyboard without actually playing: experience music as if music were played on the keyboard. From the → action-oriented perspective, all these skills involve the musician's ability to anticipate consequences to actions without concrete or audible feedback: the connection between action and anticipated feedback has been → internalised. See also → inner hearing.

### **Mental representations**

A common idea in cognitive theory is that people construct mental structures that represent – stand for – external objects and entities. Many → action-oriented theorists have criticised theories of mental representations, because they view cognition as based on interaction, rather than the construction of immaterial entities in the human mind. Mental representations, however, can also be conceived as patterns of interaction that enable people to anticipate consequences to their actions, which is compatible with the action-oriented perspective (section 3.1).

### **Mental tool**

An recurring idea in → action-oriented literature is that tools and symbols, which enable people to act and communicate, also enable people to control their own thinking. Lev Vygotsky referred to gestures, language and sign systems, mnemonic systems and decision-making systems as *psychological tools*, which have a social and cultural origin, but which people learn to employ in their individual thinking (Kozulin 1986, xxiv–xxv). For this research, I prefer the term *mental tools* when describing musicians' mental control of music by means that have a social origin – for example, by gestures, notation or music-theoretical concepts.

### **Musical awareness → aural awareness**

### **Musical community**

A group of people who in some form take part in shared musical activities and therefore share some habits of action, gestures and symbols. The concept is used hierarchically: broader communities (e.g. a community of pianists) may include smaller ones (e.g. pianists committed to a certain style). The notion of community is central for the → *action-oriented* view of musical learning, since the pragmatist theory of → *meaning* maintains that musical (or other) meanings are connected to habits of action within a community.

### **Musical thinking**

The notion of → habits as the basis of human thinking and knowledge means that people's ability to think of ideas, objects and events that are not present is based on action, and not necessarily on propositional thought. Correspondingly, musical thinking is how I refer to the mental activities whereby people anticipate and organise musical sound – activities that occur in the medium of music and that may also involve, but do not necessarily require, the use of symbols. The same idea is conveyed by the expressions 'think in music' or 'think in sound', which have been used among aural-skills and music-education researchers (section 3.4.4).

### **Musician, musicianship**

In this research, musician is a generic term for people who are engaged in music and who have developed a regular way of participating in a musical community, whether professionally or not. By students' musicianship, I refer to their holistic participation and skills in music. Educating the students' musicianship, therefore, describes the ideal of developing the students' skills contextually, related to the tasks and forms of participation in which the skills are needed. In a more restricted sense, musicianship has also been used as a curricular term for aural skills or other → music-theory subjects (Hedges 1999, 37).

### **Music literacy**

Skills of using notation and other conventional symbols for acting or communicating in music, or controlling one's musical thinking. I conceive literacy as the ability to participate in culture and make use of written language (or notated music) as a cultural resource, wherein different people may rely on somewhat different technical skills – for example in aspects conventionally practised in aural-skills education.

### **Music-theory subjects**

In institutes of higher education in music, and frequently in other music schools, it is typical to conceive music theory, music analysis, music history and → aural skills as a unit, in which the tuition is typically provided by a separate department or otherwise organised in an interconnected way. The nomenclature and specific contents of music-theory subjects may vary.

### **Open-ended musical tasks**

An expression for tasks that allow or even encourage diverse solutions and the student's active elaboration, rather than assume the students to provide pre-known answers.

### **Patterning (harmonic, melodic, metric)**

When people listen, produce and imagine music, they need to grasp music in units that are convenient in scope – and much larger than the individual pitches that appear as the most visible units in notation or on the keyboard. By patterns, I refer to units

that are based on some kind of regularity and familiarity, for example melodic pitches grasped as a units due to their belonging to a common chord. Musicians' grasp of patterns reflects both innate perceptual principles and musical experience. To emphasise the active nature of musicians' pattern perception, I use the expression *patterning*. (Section 2.2.1.)

### **Pianist, pianistic**

In this research, pianist refers broadly to people for whom the piano is a central instrument for participating in musical activities and who have developed advanced skills in participating in music through the piano – whether performing, teaching or engaging in activities such as the transcription of music at the piano. In my practitioner-research project, I included students who studied the piano as their major instrument.

### **Pitch location**

The skill of relating heard pitches to a tonality or other pitch system, which manifests in the ability to label or notate heard pitches or play them on an instrument, or produce a definite pitch in sight singing without an instrument, or accurately anticipate a notated pitch in silent score reading. By the expression, my purpose is to draw attention to the similar process that is involved in a range of different aural-skills activities and that is developed through different aural-skills methods. The expression *relative pitch* is often used in a similar meaning, but tends to be related to methods that involve relative solmisation. By location, I also seek to emphasise the active and spatial basis of the skill, as viewed from the action-oriented viewpoint (3.4.2).

### **Playing by ear**

Listening to music, or recalling previously heard music, and discovering how to play it on an instrument. The term, as well as learning by ear, is often used for somewhat free playing that may involve elements of *improvisation*. *Aural imitation* of music on an instrument is one type of playing by ear that pursues an accurate reproduction of the aural model. (Section 3.4.)

## **Practitioner research → action research**

### **Production-based / description-based**

A central tenet of the → action-oriented concept of aural skills that I propose in this research is that activities that aim at the production of musical sound – playing, improvisation, or composition – involve a different type of awareness of the music at hand than those that involve the description of musical elements or structures. These different types of → musical awareness or musical → meaning are also likely to exist when musicians imagine or silently read music – without overtly visible production or description.

### **Projection**

Connecting musical sound to spatial action so that qualities of musical sound appear spatially: musical pitch is projected onto the keyboard. In reverse, the process also means that qualities of the spatial action are mapped onto music: music may appear, for example, as consisting of ‘black and white tones’.

### **Score-mediated playing / score-mediated musical awareness**

I refer to a pianist’s musical awareness as being score-mediated when the score mediates the connection between the pianist’s movements and the musical sound that the pianist receives as feedback. Sight-reading is one form of score-mediated playing, but most common for my participants were situations in which they practiced previously known music with a score.

### **Solmisation**

The singing of melodies with syllables (solmisation or sol-fa) that refer either to absolute pitches (absolute sol-fa) or to the position of each pitch in a tonality, mode or other pitch system (relative sol-fa, especially ‘movable do’). In medieval and renaissance times solmisation was both a pedagogical method and a widely applied way of learning especially vocal music. Solmisation is also common in a lot of non-European musical traditions, and it can also be conceived more broadly, including parameters other than pitch. In Western music education, the use of solmisation gradually became more limited to formal music education, especially to aural-skills



courses, although its practically oriented use continues in choirs and singing-oriented school education.

### **Tacit knowledge**

In a broad sense, people use tacit knowledge for types of knowledge that cannot be expressed in words. In a more specific sense, tacit knowledge is a term introduced by Michael Polanyi (1958), whereby he described the nonverbal knowledge that is perpetuated in communities of practice, and which involves the ability to make judgements as expected by the community. Polanyi's term and perspective have been influential in many branches of research, such as research on professional knowledge in various fields.

**Tool → mental tool**

**Transcription (aural) → dictation**

## **Appendixes**

### **Background information**

- A. Aural-skills education in Finland – selected information
- B. Music education and music performance programmes at the Sibelius Academy:  
selected information

### **Documents**

- C. Course announcement
- D. ‘Aural skills C’– course description
- E. Initial questionnaire for participants
- F. Interview themes and musical tasks connected to the interviews

### **Data sources**

- G. List of data
- H. Coding categories

### **The aural-skills courses**

- I. Lesson summaries
- J. Course materials
- K. Lesson activities

## Appendix A: Aural-skills education in Finland - selected information

Formal aural-skills education in Finland is part of the curricula of music institutions at different levels. The following information clarifies the levels that formed parts of my different participants' previous studies.<sup>141</sup>

### Aural skills for children and school-age students

- 'Music-school level' denotes the lower courses in 'afternoon music schools', which offer *basic education in the arts*. Most state supported music schools in Finland follow an *advanced syllabus*, which includes aural skills, music theory and history as a compulsory subject – since 2002 called 'fundamentals of music' (SML 2011 and section 2.2.5). The lessons start at age 9–10, which means that many students have already studied their instrument for several years, and most students complete the basic level at age 13–16. During my participants' music-school attendance, the music-theory and aural-skills component at the basic level was taught for three years in most schools. Aural-skills education at the basic level covers diatonic melody and harmony, as well as basic meters and rhythmic figures. Aural-skills activities are also part of the programme of early childhood music education ('musical kindergartens'), which children may attend prior to or simultaneously with their preliminary instrumental studies.
- 'Music institute level' refers to the upper level of music-school courses, which usually include one year of aural skills ('Aural skills I' or 'Aural skills D') and two years of other music-theory subjects. Aural-skills courses at this level

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<sup>141</sup>I include some basic information concerning both the present situation and the time when my participants conducted their previous studies, before their entrance to the Sibelius Academy. To note the most substantial changes since my data-gathering in 1998–2000, Finnish music-school curricula have been reformed so as to increase practical music-making as part of 'fundamentals of music' lessons (section 2.2.5). The degree system in higher education, in turn, was reformed according to the Bologna process so as to involve separate bachelor's and master's degrees. At present, the course descriptions are in the process of being updated so as to confirm to the current European standard of describing goals and contents in terms of *competences* (see e.g. *Tuning: Educational Structures in Europe*, available from <http://tuning.unideusto.org/tuningeu/>). Since the 2000s, the education of aspiring music professionals is also provided in *universities of applied sciences*, whereas institutions called 'conservatories' nowadays provide education at the upper secondary level.

progress to simple chromatic melody and harmony, and more complex rhythmical figures.

- Some of my participants had also studied in the junior department at the Sibelius Academy, which offers music theory and aural-skills courses that correspond to the 'music institute level'.
- 'Aural skills II' or 'Aural skills C' (corresponding to a higher-education course, see below) is offered as an optional course in some music schools.
- Comprehensive and upper secondary schools with a music specialisation offer extra courses in music as a part of the students' school day. The music courses may also include aural skills and music theory, often in cooperation with local music schools.

### **Aural skills in higher education or vocational education**

- Some of my research participants had studied for one or two years in professional programmes in music conservatories, which in the late 1990s concentrated on the education of instrumental teachers or performing musicians, such as accompanists or orchestral musicians. The aural-skills courses in those institutions often followed similar nomenclature to the Sibelius Academy: 'Aural skills C' was taught with roughly similar contents. Since the 2000s, the professionally oriented education of aspiring musicians is provided in the music programmes of *universities of applied sciences*, in which aural-skills courses are still a compulsory subject. Music conservatories currently provide a *Vocational Qualification in Music* for students (preferably between the ages of 16 and 20 years) aiming to become musicians, which also includes aural skills.
- In the Sibelius Academy, 'Aural skills C, B and A' belonged to performing and music-education students' programmes during my data-gathering and still belong at present. 'Aural skills A' corresponds to the highest level that is compulsory for conductors and optional for others, while performing and music-education majors regularly study the C and B levels. Each course takes one academic year. 'Aural skills C and Aural skills B' belong to bachelor-level studies, but during my practitioner-research project the students could postpone these courses even to their last years in master-level studies.

## **Appendix B: Music education and music performance programmes at the Sibelius Academy – selected information**

My research participants studied in the degree programme of music performance or in the degree programme of music education, which both offered an undivided master's degree with a recommended completion time of 6 years (currently 5.5 years). The following includes some information about aural skills, music-theory subjects and some related subjects and skills in the admission requirements and in the subjects included in the two degree programmes. The information is based on the course descriptions and application guidelines of 1997–1999. The amount of students' work at that time was counted in *credit units* (cu, 40 hours of study).<sup>142</sup>

### **Degree programme in music education**

- In 1998–2000 the Master of music degree consisted of the following components:
  - Instrument studies (including voice, piano and one more instrument, as well as guitar and band instrument studies for all students) 38 cu
  - 'Free piano'<sup>143</sup>, various musical cultures, music conducting, special subjects of music education (music and movement, technology, arranging, projects) 41 cu
  - Music-theory subjects (music theory, aural skills, music history) 24 cu
  - Languages, master's thesis and seminar 21 cu
  - Educational studies 52.5 cu
  - Elective courses and selected topics of specialisation<sup>144</sup> 21 cu
- The entrance exam consisted of two extensive parts, both of which contained elements related to aural skills (1997–1999).
  - In the first part, the applicant will perform on their main instrument, sing an unaccompanied song, perform aural imitation and part-singing tests, as well as various 'free piano' tasks (accompany from chord symbols,

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<sup>142</sup>Regarding the present degree structures, which have been divided into separate bachelor's and master's degrees, see the current study guide (Sibelius Academy: *Guide 2010–2011 for Foreign Students: Curriculum structure & Course Descriptions*).

<sup>143</sup>The term used in the *Guide 2010–2011 for foreign students* is 'Free accompaniment'.

<sup>144</sup>Called 'Advanced studies' in the *Guide 2010–2011 for Foreign Students*.

harmonise a given melody, harmonise a familiar tune in different keys and, voluntarily, perform a short improvisation).

- Applicants selected for the second part took part in several auditions and tests for separate juries: main instrument, secondary instrument, teaching assignment, interview and theory and aural-skills tests corresponding to those in the degree programme of music performance.
- For the final points, 40% consisted of tests that can be regarded as being related to aural skills: the first part of the exam 20%, the dictation and aural-skills tests 15% and the theory test 5%. (60% consisted of instruments, the interview and teaching assignment.)

### **Degree programme in music performance, piano**

- The Master of music degree consisted in 1998–2000 of the following components:
  - Piano 115 cu
  - Music-theory subjects (music theory, aural skills, music history) 23 cu
  - Languages and seminar work 8 cu
  - Piano pedagogy 10 cu
  - Chamber music and Lied 6–7 cu
  - Keyboard harmony<sup>145</sup> 2 cu
  - Elective courses 17–20 cu
- The entrance examination consisted of an audition in the main instrument and assignments in music theory and aural skills. In the late 1990's the music theory and aural-skills test was graded passed / failed.<sup>146</sup>

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<sup>145</sup>A course similar to music educators' 'free piano' courses but has a more classical orientation, and which is recommended to the third or fourth study year.

<sup>146</sup>One of the participants in the present research had failed the aural-skills test, but had nevertheless been accepted after a complaint process initiated by the instrumental jury. Such cases contributed to the change in application requirements so that at present, the aural-skills and theory tests are graded numerically and contribute 5% to the applicant's final points in the degree programme of music performance.

## Appendix C: Course announcement

Participate in an aural-skills course by playing the piano

Have you not yet completed Aural skills C? Would you like to participate in a research project that seeks connections between playing and aural-skills learning? On Tuesdays at 9–11 in P-320 there will be an experimental aural-skills group for students who play the piano as their major instrument, or who have a lengthy background in piano studies. We will study your instrumental repertory and complement traditional methods of learning with ‘free piano’ activities, e.g. playing by ear, transposition and harmonisation. Previous studies in ‘free piano’ are not required, and you can join with any degree of aural skills. What is most important is your ability to participate regularly and your willingness to experiment, develop and discuss. Requests and registrations as soon as possible to the administrator of the Department of Composition and Music Theory [contacts]. You can also contact the teacher Lotta Ilomäki [contacts] for further information.

## **Appendix D: Aural skills C – course description**<sup>147</sup>

The course descriptions, which belong to the Study guide of the Sibelius Academy (Sibelius-Akatemia: *Opinto-opas 1998–1999*), are expected to provide the framework for individual teacher's pedagogical adaptations. I had planned my practitioner-research courses so that they would be compatible with the guidelines set in the course description for 'Aural skills C'.

### **Aural skills C**

2 credit units

The aim is to develop one's awareness of music from Gregorian chant to late Romanticism, to develop one's capability for musical performance and to have a command of basic metres and rhythmic patterns including triplets.

Course contents:

- singing and writing melodies based on modal scales
- singing and writing melodies based on basic tonality
- practice of diatonic scales and chromaticism
- singing and writing melodies based on chromatic tones, chromatic harmony and modulations
- listening exercises to analyse chord functions using chord dictations and recorded music excerpts
- reading and writing exercises of basic rhythm patterns and triplets (also from excerpts of musical compositions)
- the emphasis placed on the specific contents may vary according to the needs of different degree programmes.

Instruction and study

- group lessons and exercises: 64 hours

Requirements

I Course participation

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<sup>147</sup> The basis of this translation is *Guide 2010–2011 for Foreign Students*, which uses the term 'Solfège C'.



## II Final test (parts 1–4 written, parts 5–6 oral)

1. Melodic dictation
2. Rhythm dictation
3. Chord dictation
4. Chord analysis from a recorded music excerpt
5. Sight-singing task (preparation time 5 minutes)
6. Rhythm reading task (preparation time 2 minutes)

The student will be permitted to retake a maximum of two parts of the examination at the beginning of the following semester.

### Assessment:

- The teacher will assess the student on a scale of 0–5 with a colleague.

### Acceptance of corresponding courses:

- ‘Aural skills 1-2’ in music schools may replace parts 1–3 and 4–6, if the student demonstrates adequate skills in connection to the entrance exam.

### Recommended year of completion:

- 1st year

## Appendix E: Initial questionnaire for participants

Aural skills C for pianists – questionnaire for participants	Name
<p>1. Your previous studies in music: How long and when have you</p> <ul style="list-style-type: none"><li>– studied the piano</li><li>–studied other instruments or singing</li><li>–played chamber music</li><li>–played in an orchestra, ensembles or bands</li><li>–sung in a choir</li><li>–sung in some other way</li><li>–accompanied musicians</li><li>–composed, arranged or conducted music</li><li>–studied aural skills</li><li>–studied other theoretical subjects in music</li><li>–studied or otherwise practised ‘free piano’</li></ul>	
<p>2. How often do you</p> <ul style="list-style-type: none"><li>–play familiar tunes by ear</li><li>–learn to play music from recordings or the radio</li><li>–improvise</li><li>–sight-read music</li><li>–practise music you are studying by reading scores silently</li><li>–rehearse musical works mentally with neither the piano nor scores</li><li>–use recordings to learn new pieces</li></ul>	
<p>3. We will also use your instrumental repertory during the course. Please list here pieces that you have practised recently or that you would be interested in studying in the course.</p>	
<p>Which pieces are you currently studying?</p>	

## **Appendix F: Interview themes and musical tasks connected to the interviews**

In the following chart, I present the interview themes that I used in both years. For the interview situations, I made more detailed interview guides, which contained sample questions, and in which the specific ordering and formulation of the questions also varied slightly between the two years.

### **Initial interview**

#### 1. Musical background

- Going through the questionnaire, discussion
- Piano studies: beginning, later important experiences
- Habits of music listening
- Experiences of aural skills, music-theory subjects and 'free piano'

#### 2. Habits of musical practice of potential relevance for aural skills

- Example of the student's current piano repertory to be discussed (2nd year)
- Use of recordings and ways of using scores in connection to practice

#### 3. Aims and ideals regarding how to develop as a musician

#### 4. Piano practice

- Habits of practice
- Discussing the practice of a sample piece in current repertory (2nd year)
- Approaches to practice (referring to the questionnaire)

#### 5. The special course and the practitioner-research project

- Expectations for the course
- Learning journals, participation in the research

#### 6. Aural-skills tasks, discussion and self-evaluation

- Playing a melody by ear & harmonisation
  - Collan: 'Sylvian joululaulu' (a well-known Finnish Christmas carol) or
  - Pacius: Maamme (Finnish national anthem)
- Aural analysis and imitation
  - Mozart: String quartet K. 458, Adagio, bars 1–5
- Silent score reading (first-year participants only)

Grieg: In Ballad Style (Lyric pieces op. 65), bars 1–16

- Notating a melody from memory without the instrument

Linsén: 'Kesäpäivä Kangasalla' (well-known national romantic song) or

Pacius: Maamme (Finnish national anthem)

- Sight singing

Bach: Sections from cantatas (two alternatives, diatonic /chromatic)

**Middle interview** (second-year participants only)

1. Free reflections

- Experiences during the aural-skills course

2. Prepared aural-skills tasks: review and discussion

- melodies written from memory

- imitation, transposition and notation of two-part pieces from a recording

- review of two aural transcription tasks previously completed at lessons: aural analysis, notation of outer parts, singing one part while playing the other, aural transposition.

3. Aims for the course

4. Self-evaluation of aural skills

5. Problems, challenges

6. Ideas for the group

7. The course programme

8. Questions for individual students

**Final interview**

1. Learning experiences
2. Experiences and feedback concerning the course
3. Self-evaluation of aural skills
4. Experiences of the group
5. Ideas for aural-skills learning
6. Clarifying questions to individual students

## **Appendix G: List of data**

- Initial questionnaire (12 students)
- Student interviews
  - Initial interview (12 students)
  - Middle interview (8 students – participants in the second course)
  - Concluding interview (11 students – those who completed the course)
- Students' learning journals (12 students)
  - Of the first-year participants, one wrote only two journal entries and another one abandoned the journal-keeping in the spring term and preferred to reflect orally. The other students kept a regular journal during their course attendance.
- Teacher's research journal, lesson plans, documents (musical scores, e-mails)
- Tape-recorded lessons
- Lesson notes made on the basis of weekly listening to the tapes (section 4.3.3)

## **Appendix H: Coding categories**

In the following, I specify how my data support the findings described in Chapters 6 and 7 and especially the descriptions of the students' learning processes in section 6.1. While I have based my interpretations on my entire work with the students, the systematic analysis of the journals, interview transcripts and selected recordings was a way to critically examine and refine my interpretations and also a way of facilitating the reader in following my reasoning.

I began the coding of my verbal data by treating the students' learning journals and the interview transcripts separately. I therefore first list separately the coding categories that I applied to these two parts of data. Then, I describe the findings in my data that I used when writing Chapters 6 and 7. I also clarify how my analysis of the tape recordings supports the findings I made with the verbal data.

### **Coding categories for learning journals:**

- *Musical activities*
- *Learning processes and strategies (for aural-skills tasks)*
- *Contexts of musical action*
- *People and social relationships*
- *Journal functions*

### **Coding categories for the interviews**

- *Musical background and broader engagement in music*
- *Values and ideals for musicianship*
- *Musical activities and contexts of musical action*
- *Strategies (selectively, compared to the aural-skills course)*
- *People and social relationships*

## Findings related to Chapters 6 and 7

The students' *musical background and broader engagement in music* (interviews and questionnaire)

- The interviews indicated a clear division between the students in terms of their previous aural-skills experiences. The 'rhythmically and texturally oriented' students had very negative and frustrating experiences, whereas the 'melodically oriented' students had managed their pre-professional aural-skills courses well – even though some of them were critical about some of the contents or pedagogical approaches. Of the 'students with mixed profiles', the two students who had challenges in both melody and harmony had also experienced aural skills as highly difficult, but yet basically perceived them as relevant and worthwhile. The two students who were mostly oriented towards playing by ear, in turn, had only completed the 'music-school level'. They recalled some difficulties with the conceptual approaches and nomenclature in aural-skills courses, which, however, did not seem to relate very much to their aural awareness.
- There was a clear division between the 'melodically oriented' students' descriptions of their elementary piano studies, which had involved informal playing by ear or playing and singing from songbooks, and those of the 'rhythmically and texturally oriented students, who recalled how they had immediately played from notation and quickly proceeded to demanding repertory. The 'students with mixed profiles' had various backgrounds, but reinforced my interpretation that early informal playing by ear was related to a melodic approach to music shown in the courses.
- The 'melodically oriented' students had extensive choir experience. Three of them had sung in choirs for more than ten years during their childhood and youth, and the remaining two had both, aside from four years in choirs, sung in ensembles among friends or family members. One student in the 'mixed profiles' group, too, had sung in choirs more than ten years, and due to her late beginning of piano studies, choir had been her main musical engagement in her childhood. Except for one of the 'rhythmically and texturally oriented' students, all the students had some choir experience, but those who had only sung for two or three years in secondary school or later did not demonstrate a



similar melodic orientation as the child choristers. The formal voice lessons that some students had behind them or choir experience at a later age did not indicate a regular connection with aural-skills performance.

- The students had played a wide range of secondary instruments, mostly wind instruments, for 1–4 years, which I nevertheless did not find related to their aural-skills performance in any clear way.
- Most of the students had studied ‘free piano’ during their music-school years or higher education, ranging from a few private lessons up to three years. The students’ formal studies in ‘free piano’, however, did not indicate a clear connection to their performance or learning processes in aural skills. During my data-gathering the ‘free piano’ component of music-schools curricula was very new, and the students’ descriptions suggested that the courses had been dominated by the playing of songbook chord symbols and learning of accompaniment styles, and not so much by such activities as playing by ear or aural transposition, which I expected to be related to aural skills. The students’ descriptions of their informal playing by ear, however, were more clearly connected to aural-skills performance.
- The ‘rhythmically and texturally oriented’ students had experienced music-theory courses as much more meaningful and approachable than aural-skills courses. Three of the ‘melodically oriented’ students had reverse experiences. These patterns seemed to be connected to the students’ ease of approaching music through scores or through listening and aural analysis. Two of the ‘melodically oriented students’ were more advanced in their music-theory studies and had practically completed the music-theory component of their master’s studies. Those participants who had already reached music-analysis courses, normally studied after the first music-theory courses in higher education, believed that the courses had given them useful viewpoints for their pianistic practice.

*Musical activities, observations on the students’ learning processes and the students’ strategies for aural-skills tasks (learning journals and recordings of aural-skills tasks)*

- In connection to the first interview, the ‘melodically oriented’ students notated the melody from memory independently and played the melody by ear fluently

(with a maximum of 3 pitches that needed correction). They could also harmonise the melody and even appeared to choose chords that corresponded to the composer's original harmonisation, but needed some time to find the chords. The 'rhythmically and texturally oriented' students could not complete the melody without an instrument and needed to find the melody on the keyboard by trial and error. Of the 'students with mixed profiles', the two students who had challenges in both rhythm and melody had in the musical tasks in the first interview similar difficulties to the 'rhythmically and texturally oriented' students, while the two students who played by ear, in turn, were similar to the 'melodically oriented' students, but directly harmonised the melody and seemed to solve by reference to harmony rather than melody.

- The aural imitation task in the first interview (Mozart: String quartet K. 458) usefully complemented the other evidence and suggested that some students were more fluent in following melodic lines while others recognised chords first. This task, however, did not indicate the students' differences as clearly as the other tasks. When given some minutes, all students were able to recognise some chords, and the situation turned into an occasion to experiment with the strategy and to discuss the students' ideas on the forthcoming course.
- Regarding the students' references to various lesson activities in their learning journals, distinctive to the 'melodically oriented' students was that they frequently described various vocal warm-ups as helpful, whereas the other students did not discuss these introductory parts of the lessons. Apparently, the possibility to practise musical structures was helpful to the students for whom singing was fluent and natural. The frequency of references to different activities was revealing in terms of the students' central interests and concerns during the courses.
- The data of the 'melodically oriented' students and the two students who were most used to playing by ear often suggested that the students solved aural-skills tasks by projecting music onto the keyboard. Aside from direct references to the keyboard, the students noted that it was easier to conceive pitch structures in keys with few accidentals. Such references were often connected with a

tendency towards rather detailed and even atomistic thinking, such as counting individual tones so as to recognise chords.

- Some ‘melodically oriented students’ as well as two of the ‘students with mixed profiles’ devoted extensive attention in their journals to the learning of harmonic analysis and to their learning of the chord-degree system. They mentioned various lesson activities that they felt had been helpful and recorded factual information about the construction and usage of chords. A process was also visible whereby chords first appeared to the students as technical building blocks of music, but later became connected to observations about musical expression or style.
- The tape recordings of the lessons, as well as my own journal, revealed how I worked with the ‘rhythmically and texturally oriented’ students’ awareness of melodic scale degrees. The students themselves rarely referred to the specific strategies of this melodic work in their journals or interviews. The middle interviews and some tape-recorded lessons, however, indicated that each student experienced a clear phase whenin they noticed a new security in their pitch-location skills and melodic ‘inner hearing’.
- Still, after the ‘rhythmically and texturally oriented’ students’ melodic progress, the tape recordings and some journal entries also suggested that the students experienced a conflict between detailed and global thinking. The strategies they had learned for solving aural-skills tasks appeared to be too slow and laborious in comparison to the types of aural awareness they had learned to use as musicians.
- Regardless of the students’ specific orientation, the journals contained positive references to the keyboard activities, as well as to the suggestions that I gave to the second-year students’ written transcription of music, starting from phrase-level units.
- The students’ experiences of singing were very diverse and were not always congruent with the interpretation of the student’s competence or motivation, which I had made on the basis of the aural-skills tasks (section 6.2).
- We spent very limited time for rhythm tasks in the courses. The students’ references to rhythmic work in the journals, as well as some tape-recordings of lessons, nevertheless revealed how the study of rhythm elicited spontaneous

discussions among the students on musical elements that otherwise remained weak in the courses, such as the role of timbre and instrumentation, and stylistic and expressive functions of rhythm. Some rhythm-reading tasks also created classroom discussions in which the students shared experiences and had ideas for each other's practice. Such findings suggested to me that increasing the emphasis given to rhythm and broadening the pedagogical approaches would be a worthwhile direction of development.

- References to difficulties in discerning chords or bass lines were common in the students' data. They caused me to realise that my idea of relieving typical perceptual challenges through practically oriented work had not yet been as successful as I had wished. Some students discussed in their journals and at lessons that perceptual difficulties could be relieved by conscious working orders that first focused on global perceptions, and some of the second-year participants referred to the dictation strategies that had been introduced in the course. In some classroom discussions, the students also actively shared their strategies for aural imitations and transcriptions.
- Some students frequently voiced their concerns about not being able to label the harmonic structures that they played by ear. Such references were more frequent than I had realised while teaching, and suggested to me that I needed to emphasise the intrinsic value of playing by ear more clearly.

*Values and ideals for musicianship and aural awareness (interviews)*

- The students often spontaneously led the interview talk towards their values and ideals for musicianship. Concentrated and stylistically informed practices were frequently discussed themes, which the students also perceived as being interconnected. Many students' reflections on these topics remained rather general, or the students suggested connections to music-theory subjects generally rather than connections specific to aural-skills learning. I describe some of these viewpoints through the students' cases in section 7.1.
- Cultivated piano tone appeared in most students' data as a characteristic of sensitive musicianship, and some students discussed the topic in great detail. The 'rhythmically and texturally oriented' students' reflections in particular suggested a tight connection between their technical command of the

instrument and aural awareness: the anticipation of the musical sound and control of movement were developed in strong unity. I realised the difference between such thinking and the activities of our aural-skills courses, in which the students could not very often draw on the familiar kinaesthetic cues whereby they had learned to direct their aural perception and anticipation.

- A literally correct reproduction of music often appeared in the students' reflections as the opposite of musical sensitivity and understanding. This observation led me to notice the apparent discrepancy between the requirement of correct reproduction of pitch structures that was typical for aural-skills activities – even in my courses – and the students' pianistic work. I address this issue in section 7.3.
- Many students found a connection between their most meaningful aural-skills experiences and their broader ideals and values of music through the idea that it was useful for a musician to practice various musical elements and structures by varying them and learning alternative solutions, as opposed to repetitive practice. I gathered such reflections together under the theme *flexible practice*, which I discuss in section 6.3. Besides the interviews, this theme was also applicable to the learning journals.

#### *Activities, contexts of musical action (interviews)*

- In the interviews the students had the possibility to spend time discussing the activities and contexts that they found central for their musicianship. I recognised the discrepancy between the fact that most students' discussions on their pianistic work and ideas on aural awareness centred around score-mediated learning, whereas in the aural-skills courses most of the time was spent on learning by listening, aural imitation and transcription. The students who played by ear as a more substantial part of their musician's work faced less of a discrepancy.
- In their journals and interviews, the students often reflected on aural and score-oriented approaches to music learning. They noted that the skills visible in aural skills classrooms were comprehensible on the basis of the very different approaches to music learning that they witnessed even among the group. I realised, however, that the course activities, as well as my

questionnaire and interview themes, did not really help the ‘rhythmically and texturally oriented’ students to bring up their strengths, because score-mediated work was given so little attention.

- I paid attention to the references that the students made in their learning journals to contexts and activities outside of the aural-skills course and also to those sections and features that indicated that the students treated the aural-skills classroom as a specific practice place with specific rules and criteria. The students frequently related the work in the courses to other contexts of musical action and noted both connections and discrepancies. In Chapter 9, I discuss some problems that I found in the specific context of the aural-skills course.

#### *People and social relationships* (learning journals, interviews)

- The range of people mentioned in the students’ data was often very revealing. Apparently, the students often found it easiest to articulate their ideals for musical skills, values or types of practice by referring to peer students, teachers or famous musicians. The students’ discoveries of new goals and ideals for their musicianship also appeared to be connected to encounters with specific people.

#### *Journal functions* (learning journals)

- Particularly at the beginning of the courses, the ‘rhythmically and texturally oriented’ students mainly employed their journals for reflecting on the atmosphere during the courses and their feelings towards aural-skills study.
- Some students employed their journals for organising and planning their study. They recorded plans for their practice, clarified factual information studied in the courses, monitored the success of their practice and also praised themselves after successful execution of their plans. Such journal use was characteristic to the ‘melodically oriented’ students, whose main challenges concerned the learning of harmonic analysis, which apparently was a task quite suited to such reflection.

- Experiences of frustration and critical questions concerning the contents and goals of the courses were always expressed in a very polite tone, but became more frequent in the journals towards the spring.

## Appendix I: Lesson summaries

I include here summaries of the latter of the two practitioner-research courses in 1999–2000, in order to illuminate the contents of the aural-skills lessons in the practitioner-research project. In the former year, we employed similar activities and order of progression, but due to many students' irregular attendance, the group situations were often slightly atypical of Finnish aural-skills courses.

'Singing & playing' refers to the student's singing of one part while playing the other one on the keyboard. The Appendix K (Course activities) explains the different types of activities in more detail. I also listed some topics of group discussion, both those spontaneously initiated by the students and those prompted by my questions.

### September 14th

- Discussion: introduction of the participants, practicalities, instructions for learning journals
- Instruction and group practice: the major scale and tonal tendencies of melodic scale degrees
- Mozart: Aria of Cherubini "Voi che sapete" (*The Marriage of Figaro*), bars 1–18.
  - Aural analysis: cadences and melodic phrases
  - Transcription of outer parts, chord-degree analysis
  - Keyboard activities: singing & playing, transposition
- Preparation of sight-singing homework: classical canons

### September 21st

- Beethoven: Piano sonatas op. 2/1 and op. 7, slow movements (8 bars from the beginning)
  - Analysis of music with a score (tonal tendencies, work with a partner)
  - Sight singing, singing & playing of outer parts and transposition
- Warm-ups and review of homework
  - Triads on the different scale degrees in major and harmonic minor
  - Inversions of triads (singing in canon)
  - Arpeggiated singing of the chord progression from Mozart: "Voi che



sapete”. Vocal improvisation based on the progression.

- Sight-singing: canons, preparation of new homework

September 28th

- Warm-ups and theory review
  - Inversions of major and minor triads in unison and in canon, inversions of the dominant seventh chord
  - Teacher-directed instruction: uses of the inversions of the dominant seventh chord in common-practice tonal music (voice-leading chords), figured-bass symbols.
  - Keyboard task: finding of chord-degree symbols and inversions on the basis of a given bass line.
- Mozart: Aria of Papageno “Ein Mädchen oder Weibchen” (*The Magic Flute*), bars 1–18.
  - Aural analysis and transcription of outer parts without the keyboard. Playing, transposing by ear, notation in a transposed key.

The transcription shows three systems of music, each with a treble and bass staff. Fingerings are indicated by numbers 1-5. Chord symbols and figured bass notation are written below the bass staff of each system.

System 1 (Bars 1-5):  
 Treble: 1 2 | 3 2 1 | 4 3 | 2 5  
 Bass: 1 1 | 1 3 | 1 1 | 1 3  
 Chord symbols: I, V<sup>7</sup>, I, V<sup>6</sup>/<sub>5</sub>, I, V<sup>7</sup>

System 2 (Bars 6-10):  
 Treble: 4 2 | 5 4 3 | 2 | 1 2  
 Bass: 1 1 | 1 3 | 1 1 | 1 2  
 Chord symbols: V<sup>7</sup>, V<sup>2</sup>, I<sup>6</sup>, IV<sup>5+6</sup>/<sub>5</sub>, V, I, V<sup>6</sup>/<sub>5</sub>

System 3 (Bars 11-15):  
 Treble: 3 5 | 1 | 3 5 | 1  
 Bass: 1 1 | 1 2 | 1 1 | 1 3  
 Chord symbols: I, V, I, V<sup>6</sup>/<sub>5</sub>, I, V, I

Figure 1: Student’s transcription, preparatory stage

⑥ Mozart: Ein Mädchen oder Weibchen (Hänsel und Gretel)

*ritard.  
ed. subito*

The image shows a handwritten musical score for the first system of 'Ein Mädchen oder Weibchen' from Mozart's opera Hänsel und Gretel. The score is written on six staves, organized into two systems of three staves each. The key signature is one sharp (F#) and the time signature is 2/4. The notation includes treble and bass clefs, notes, rests, and dynamic markings like 'ritard.' and 'ed. subito'. The first system consists of two staves of treble clef and one staff of bass clef. The second system consists of one staff of treble clef and two staves of bass clef. The third system consists of one staff of treble clef and two staves of bass clef. The notation is handwritten and appears to be a student's transcription.

Figure 2: Student's finished transcription

October 5th

- Warm-ups: singing of inversions of the dominant seventh chord. Playing chords on the basis of a given bass line.
- Improvisation: a classical period (individual practice, work in pairs, playing solutions to the group in pairs)
- Sight-singing: canons
- Rhythm reading (technical exercises involving rests)
- Aural imitation and rhythm dictation. Mozart: Variations in F major K. 352, var I (4 bars)
- Instructions and material for aural imitation tasks to be done as homework

### October 12th

- Warm-ups: singing of triads on the seven scale degrees in minor
- Harmonic analysis by listening. Mozart: “Dir, große Königin der Nacht” (*The Magic Flute*, excerpt from act II, scene 30)
- Sight-singing: canons
- Dvorak: Slavonic Dance op. 46/4
  - Harmonic analysis: chord degrees and bass line
  - Aural transposition on the keyboard
- Review of homework. Harmonic analysis from Schubert: Impromptu in A flat major op. 142/2

### October 19th

- Warm-up (keyboard): filling in inversions of the dominant seventh chord and VII<sup>o</sup>7 chord to given chord progressions
- Beethoven: Piano sonata op. 10/1, I mvt, beginning
  - Harmonic analysis with a score
  - Figuration of the harmonic progression (bars 1–8), transposition by ear
  - Homework: similar practice of a piece from the student’s piano repertory
- Vivaldi: Violin concerto RV 315 ‘Summer’ (Four seasons), I mvt, Introduction
  - Listening and singing the bass line
  - Recognition of the Neapolitan chord (N6)
- Figuration of a chord progression involving the N6
  - Aural imitation on the Keyboard. Schumann: Armes Weisenkind (*Album for the Young* op. 68), bars 1–8
- Reflection task for learning journals: aims for aural-skills learning

### October 26th

- Warm-ups (vocal)
  - Seventh chords on different scale-degrees in major and harmonic minor
  - Chromatic leading tones in major
- Warm-ups (vocal, keyboard)
  - Cadences involving N6 and secondary dominants: singing and playing

- Secondary dominants of different scale degrees in major
- Sight singing: canons
- Review of harmonic analysis from the previous lessons (Schumann: Armes Weisenkind)
- Preparation for homework: Harmonisation of folk-song melodies

#### November 2nd

- Warm-ups (vocal): Chromatic leading tones in major and the chromatic scale
- Warm-ups (keyboard): sequences involving secondary dominants, root positions and inverted forms
- Schubert: Der Müller und der Bach (*Die Schöne Müllerin*), bars 1–28
  - Sight singing: melody, bass
  - Playing chords on the basis of chord-degree symbols
- Verdi: Aria “La donna e mobile” (*Rigoletto*). Aural transcription (melody, bass, harmony), (bars 1–44, focused work on sequence in bars 27–34)
- Individual checking of homework during the journal session

#### November 9th

- Review of harmonisation homework
  - Listening to students’ solutions
  - Imitation of the bass used in a student’s solution
- Vivaldi: Flute concerto RV 91, II mvt
  - Analysis: Form, cadences, harmony
  - Extraction of a sequence (descending fifths, diatonic) for keyboard practice, transposition

#### November 16th

- Review of harmonisation homework (students that were previously absent)
- Warm-ups (keyboard): descending fifths, diatonic: listening to the bass, playing the sequence, recognition of key
- Aural recognition of sequence. Mozart: “Drei Knäbchen” (*The Magic Flute*, scene 7/quintet 5, excerpt). Thinking of other music examples that involve a similar sequence

- Aural transcription and keyboard transposition. Schumann: Abegg-variations, theme, 8 bars
- Sight singing: canons

November 23rd

- Singing and transposition of the melodic transcription task from the previous lesson. Aural transcription, harmonic analysis and aural transposition of bars 9–16
- Information about the forthcoming prepared tasks connected to the middle interview
- Group discussion (45min): the learning of aural skills in connection to piano practice
- Homework: to find modulations in the students' instrumental repertory

November 30th

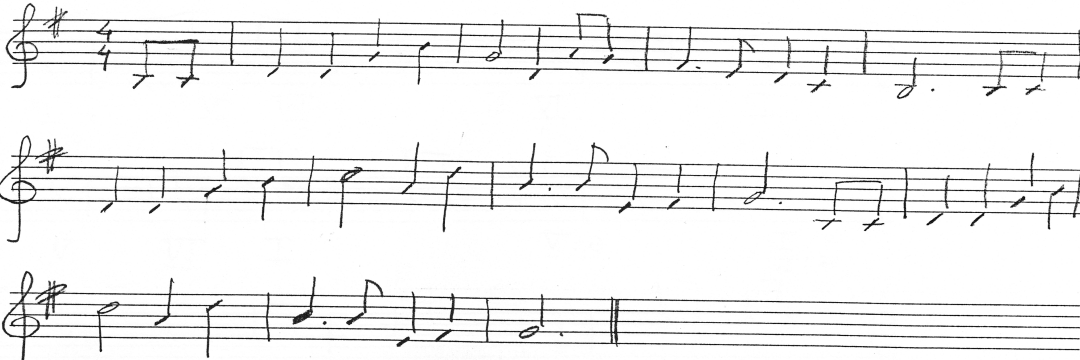
- Warm-ups (vocal): inversions of seventh chords
- Sight-singing: canons
- Warm-ups (keyboard): diatonic sequences (descending fifths and descending 5–6 progression)
- Vivaldi: Flute concerto RV 99, II mvt: aural transcription

December 7th

- Warm-up (keyboard): playing secondary dominants on the basis of chord-degree symbols
- Aural-skills tasks with Christmas carols
  - Sharing ideas about practising aural skills with familiar melodies
  - Playing of a melody without sound, transposition
  - Harmonisation, listening to students' solutions and discussion on chord choices, imitation of an extract
  - Recognition of a song on the basis of harmony written in chord-degree symbols
  - Composition of a second part to a carol, singing & playing of the two parts

No onkos tullut kesä

17



*Figure 3: A melody used for playing by ear and harmonisation*

*(Traditional Christmas carol, later transcribed by the student)*

December 14th

- Tasks on Christmas carols (playing the melody without sound, harmonisation, transposition)
- Sibelius: Christmas carols op. 1 no. 4 and 5. Singing & playing of outer parts, harmonic analysis from score, arpeggiated singing of harmony, mental hearing of harmony. Figuration of extracted chords
- Weber: *Oberon*, Overture, bars 10–22. Aural transcription of bass and analysis of harmony

The image shows a handwritten musical score for Purcell's 'Aria'. It consists of four systems, each with a treble and bass staff. The key signature has one flat (B-flat), and the time signature is 3/4. The notation includes various note values (eighth and sixteenth notes), rests, and accidentals (sharps and naturals). The piece concludes with a double bar line and repeat dots.

Figure 4: Aural imitation task, which the student also transcribed before the middle interview

February 1st

- Polyrhythmic keyboard exercises
- Modal music examples: 'La Jealousie' (a Renaissance dance), Gregorian melodies
- Learning melodic fragments by ear, recognition of the collection of pitches
- Theory review and warm-ups (vocal & keyboard)
  - Modal scales
  - Melodic phrases based on Dorian and Phrygian modes: imagining the

scale at various pitches, playing and singing

- Sight singing: a Medieval chant in Dorian mode
- Melodic improvisation tasks in Phrygian mode (singing and playing: each student working individually)
- Bartók: In Folk Song Style (*Microcosmos* no. 100, book IV)
  - Aural transcription of melody
  - Sight singing of a section
  - Some students imitated a second voice on the keyboard

February 8th

- Improvisation task
  - Polyrhythmic keyboard exercises on tonal material: arpeggiate chords in the left hand, melodic figuration in the right hand.
  - Review of the idea of extending harmonic progressions using passing or neighbouring chords. Extension of the exercise into a classical period
  - Singing bass lines while playing
  - Written harmonic analysis of one's own improvised period
  - Listening and aural analysis of other students' improvisations
- Schubert: Impromptu in B flat major op. 142/3
  - Listening, free discussion and analytical observations
  - Transcription of the bass and harmonic analysis of bars 1–16



### February 15th

- Melodic improvisation tasks on the Dorian mode
- Sight singing and singing & playing. Medieval Pilgrims' song
- De Nola: Madrigal. Analysis with the score (cadences), singing & playing of outer parts
- Schubert: Impromptu in B flat major op. 142/3 (continued)
  - Analysis of tonal tendencies of the melodic tones
  - Discussion: the idea of hidden polyphony in a melodic line
- Liszt: Grandes études de Paganini no. 6, theme
  - Transcription of melody and bass

### February 22nd

- Warm-ups (vocal): modal scales in canon: each one student also sings & plays in canon with the keyboard
- Melodic improvisation based on modal scales
- Sight singing (review of homework). Alle psallite–Alleluya (13th-century motet); canons
- Student-guided melodic dictation. The students prepared to teach a dictation task to their partners

### February 29th

- Warm-ups (vocal & keyboard) modal scales, also each student singing & playing in canon and the group in canon
- Sight singing: canons, De Nola: Madrigal
- Beethoven: Piano Sonata op. 7, II mvt
  - Students' work in pairs: aural transcription task with a partner.
  - Group discussion about musical memorisation

### March 7th

- Warm-ups (vocal): modal scales in canon
- Sight singing: canons
- Grieg: Piano concerto in A minor, second theme

- Rhythm dictation
- Harmonic analysis

#### March 14th

- Lasso: *Madonna, ma pietà* (motet). Choral singing, singing & playing of outer parts. Preparation of a new choir song for homework.
- Schubert: *Incidental music “Rosamunde”* D. 797, 'Entre-Act' after scene 3 in B flat major, bars 1–16
  - Free description of aural perceptions
  - Transcription of bass
  - Analysis of harmony. Discussion about hierarchical harmonic structures: voice-leading chords
- Warm-ups (keyboard + 'inner hearing'): secondary dominants
- Group discussions
  - The programme of the lesson: students' needs
  - How to practise and review chromatic chords
  - Singing as an approach to aural-skills practice

#### March 23rd

- Polyrhythmic keyboard exercises: quadruplets in triple metre, changing between regular figures in triple metre and quadruples
- Chopin: Nocturne in B op. 9 no. 3
  - Rhythm transcription
  - Melodic transcription and harmonic analysis (excerpt)
  - Playing chords on the basis of chord-degree symbols
  - 'Inner hearing' exercises with the melody

#### March 28th

- Mozart: Aria of Ferrando “Tradito, schernito” (*Così fan tutte*): harmonic analysis (beginning)
- Augmented sixth chords:
  - Theory review and warm-ups (vocal, keyboard)
  - Music examples. Beethoven: Symphony 5 (I mvt, beginning); Mozart: Symphony 40 (I mvt, beginning)

- The students select an individual transcription task for homework
- Haydn: Arietta no. 1 in E flat major Hob. XVII/3, theme
  - Aural analysis and transcription
  - Group discussion about solving transcription tasks and about the final exam

#### April 4th

- Rhythm reading: figures involving double dots
- Rhythm exercises on the keyboard and rhythm reading: triplets
- Sight singing (canons)
- Haydn: Arietta Hob. XVII/3. Review of previous lessons' music example and recognition of secondary dominants

#### April 11th

- Rhythm study: Reading and playing music examples and listening to recordings
  - Bartók: String quartet IV, III mvt; Varése: Density
  - Discussion about rhythm reading among the students
- Rhythm dictation. Debussy: String quartet in G op. 10, I mvt, beginning
- Discussion:
  - Prepared transcription tasks belonging to the final exam
  - Sequences: discussion and review of previously learned material among the students
- Classical canons: homework review, new sight-singing task, harmonic analysis
  - Review of augmented sixth chords, chord construction and transposition on the keyboard

#### April 18th

- Individual review of the students' prepared transcription tasks. The students prepared 8–10 music examples of the course repertory, with various types of aural-skills assignments according to their individual needs: listening and retranscription of outer voices, harmonic analysis, singing & playing outer parts and transposition by ear

April 26th & May 2nd

- Final exam: written and oral part
- Written part:
  - Melodic dictation
  - Rhythm dictation
  - Harmonic analysis from a recording
- Oral part
  - Sight singing
  - Rhythm reading

May 9th

- Final interviews.
- Review of two students' complementary tasks

## Appendix J: Course materials

Additionally to the materials mention in Appendix I/Lesson summaries, the following materials were used for the students' homework and sometimes at lessons.

### A) Homework repertory: Aural transcription and free imitation tasks (orchestral and vocal music)

#### 1998–1999

- 1 Haydn: Piano Sonata no. 48 in C major Hob. XVI:35. I Allegro con brio (beginning).
- 2–3 Mozart: Aria of Papageno “Ein Mädchen oder Weibchen wünscht Papageno sich” (*The Magic Flute* K.620).
- 4 Mozart: Aria of Blonde “Durch Zärtlichkeit und Schmeicheln” (*Abduction from Serail* K.384).
- 5 Mozart: Clarinet Quintet in A major K.581. II Larghetto (beginning).
- 6 Mozart: Quartet “Non ti fidar, o misera” (*Don Giovanni* K.527) (beginning).
- 7 Vitali: Chaconne in G minor (arr. for violin and piano by Ottorino Respighi).
- 8 Liszt: Grandes études de Paganini S.141 no. 6 (theme).
- 9–10 Mozart: String Quartet no. 15 in D minor K.421/417b. II Andante.
- 11 Brahms: Variations on a Theme by Haydn op. 56a (theme: ‘Chorale St. Antoni’).
- 12 Brahms: Symphony no. 3 in F major op. 90. II Adagio non troppo (beginning).
- 13–14 Strauß (Jr): Waltz “An den schönen, blauen Donau” op. 314 (beginning).
- 15 Pacius: Suomen laulu [’Song of Finland’].
- 16–17 Verdi: Aria of Gilda “Caro nome” (*Rigoletto*).
- 18 Mozart: Aria of Pamina “Ach ich fühl’s, es ist verschwunden” (*The Magic Flute* K.620).
- 19 Mozart: *Don Giovanni* K.527, Overture.

#### 1999–2000

- 1-10 Vivaldi: Slow movements from violin, cello, flute, oboe and string concertos: RV 88, 90, 91, 99, 113, 167, 242, 406, 455 and 452.

- 11 Vivaldi: Violin concerto in G minor RV 315 “Summer” (*The Four Seasons*) (beginning).
- 12 Händel: *Messiah* HWV 56, Pifa (Pastoral Symphony).
- 13 Händel: *Music for the Royal Fireworks* HWV 351, La Paix.
- 14 Mozart: Aria of Cherubino “Voi che sapete” (*The Marriage of Figaro* K.492).
- 15 Mozart: Aria of Cherubino “Non so più cosa son, cosa faccio” (*The Marriage of Figaro* K.492).
- 16–17 Mozart: Extracts from *The Magic Flute* K.620: “Wie stark ist nicht dein Zauberton” (Act I); “Die, große Königin der Nacht” (Act II).
- 18–19 Mozart: Symphony no. 33 in B flat major K.319. III Minuet and Trio.
- 20–21 Mozart: *Eine kleine Nachtmusik* K.525. II Romance.
- 22 Mozart: Aria of Ferrando “Tradito, schernito” (*Così fan tutte* K.588).
- 23 Mozart: Piano concerto no. 24 in C minor KV 491. III Allegretto (theme).
- 24 Haydn: *The Creation* Hob. XXI:2. Aria for soprano “Nun beut die Flur das frische Grün” (excerpt).
- 25 Beethoven: Symphony no. 1 op. 21 in C major. I Adagio molto – Allegro con brio (beginning).
- 26–27 Schubert: *Incidental music “Rosamunde”* D.797, ‘Entre-Act’ after scene 3 in B flat major (sections).
- 28 Verdi: Choir “Posa in pace” (*The Masked Ball*) (beginning).
- 29 Verdi: Aria “Che v’agita così” (*The Masked Ball*) (excerpt).
- 30 Dvorak: Slavonic dance in F major op. 46 no. 4 (excerpt).
- 31 Weber: *Oberon* J.306, Overture (excerpt).
- 32 Bizet: *L’Arlésienne Suite no. 2*. Minuet.
- 33 Bizet: *L’Arlésienne Suite no. 2*. Pastorale (excerpt).

**B) Homework repertory: Imitation tasks from keyboard music**

Two-part dance pieces by W.Fr.Bach, Graupner, Händel, Purcell, Qui, Telemann and Mozart (Das Londoner Notenbuch)

### **Sight-singing materials**

Molnár, Antal (ed). 1955. *Canons classiques: sans les textes: manuel de solfège / sélection et notes explicatives par Antal Molnár, édition revue par László Agócsy.* Budapest: Editio Musica.

### **Rhythm materials**

Horst, F. van der. *Maat en ritme: 150 oefeningen in het uitvoeren van ritmen.* Deel 2. Amsterdam: Broekmans & van Poppel.

Lavik, Babben & Krognes, Astrid 1988. *Rytme: studieboek med musikkeseksempler.* Oslo: Norsk musikforlag.

### **Melodies to harmonise**

Folk songs, Christmas carols

### **Music examples from the students' piano repertory (examples)**

The following examples were used by the students for various aural-skills activities (singing and playing outer parts and transposing them by ear, singing arpeggiated chords, analysis of harmony, playing reductions and improvisation on harmonic patterns):

- Bach: *English Suite no. 1 in A minor* BWV806. I Prelude.
- Beethoven: Piano Sonata no. 21 op. 53 in C major, 'Waldstein'. I Allegro con brio.
- Beethoven: Piano Concerto no. 3 op. 37 in C-minor. I Allegro con brio.
- Mussorgsky: *Pictures at an Exhibition.* X The Great Gate of Kiev.
- Sibelius: *Scène Romantique* op. 101 no. 5.

## **Appendix K: Lesson activities**

In the following, I will briefly describe the most central musical activities involved in the aural-skills courses in my practitioner-research. As the lesson summaries (Appendix I) reveal, the aural-skills courses were comprised of recurring activities, in which I aimed at providing the students with regular, progressive practice, and occasionally used activities. With the latter, I sought to give the students new ideas on how to practice, or experimented with types of work that had not yet gained a regular place in the lessons. (See also section 4.2.3.)

### **A) Regularly used activities**

#### **Warm-ups and technical exercises: singing and playing chords and scales**

The lessons regularly involved preparatory exercises that aimed at encouraging the students' singing or making them comfortable with various chords and scales through playing and singing. The warm-ups were based on easily memorable musical patterns, with the intention of freeing the students from memory challenges that were typical for the other activities during the lessons. In some exercises, I only gave the instructions aurally – by singing or playing and explaining the used musical patterns – but often wrote the scales or chords on the board. I also had the students play and sing examples of the new chord degrees, chord inversions and modal scales that had been involved in the music examples in the later lessons. Even though the practice of chords and scales also sometimes belonged to the middle of the lessons to prepare the following tasks, I simply refer to all such work as *warm-ups*.

In many activities at the lessons, the students sang and practiced at the keyboards at their own pace. The students seemed to get used to the slight noise that the other students' singing produced in the classroom.

#### **The main music examples: 'extraction–elaboration–application' tasks**

The largest proportion of time at each lesson was devoted to one or two main music examples, to which the students listened from recordings and which were then used for the practice of transcription and aural analysis of music. Through these examples, I also introduced the students to various chord degrees and chromatic chords, as well as the chords' characteristic usages in common-practice tonal music, and arranged the



material so that the harmonic material gradually grew in difficulty. By ‘extraction–elaboration–application’ tasks, I refer to the principle of first listening to music and extracting harmonic and patterns from it, elaborating them through various keyboard activities and finally analysing new examples in the next lessons to which the students could apply their knowledge.

In the first year, the students usually directly used the keyboards to analyse and transcribe the music, whereas in the second year, I introduced them to written transcription without the instrument from the very beginning. In the second year, I suggested a working order with the transcription tasks to the students, whereby my aim was to guide them towards listening to musically meaningful units before note-to-note details. We usually listened to the example together first and discussed the meter and phrasing. Next, the students notated the outer voices and gradually proceeded to the harmonic analysis of the examples. I often asked the students to write down as much as they could manage and only then proceeded to keyboard transposition and figuration. Thereafter, they would use the keyboards in a variety of ways: check the harmonies which they did not immediately recognise, transpose and figurate the harmonic progression, sing one of the outer voices while playing the other or improvise on the same harmonic structure. As the course proceeded, I allowed more freedom for the students to choose their own way of working, and they also practiced the notation and harmonic analysis alone for homework.

I mostly used orchestral and opera music for the harmonic analysis tasks. My intention was to encourage the students not to reproduce the music note by note but to grasp harmonic units and find a comfortable keyboard arrangement for them. I also included some popular classics to reduce the challenges to the students’ memory and to suggest to them how they could work with familiar music. The students also had a selection of recordings for their home study (Appendix J/Course materials).

### **Sight singing**

The sight singing of melodies regularly belonged to our lessons and the students’ homework. For the repertory, I used Classical canons (Molnár 1955), some choral pieces especially in the study of modal music, and occasionally excerpts from piano repertory, from which the students sang and played the outer parts. At the lessons, the students sang the canons and songs prepared as homework, often as an ensemble.

## **Transcription and imitation homework**

The students did several types of homework using recorded music examples. They reviewed aural transcription tasks that had been previously solved at lessons by playing harmonic progressions from them, singing and playing outer voices and transposing them by ear. Towards the spring, they did some aural transcriptions on their own. I also assigned the students recorded two-part piano pieces, which I asked them to imitate or write down in detail. I played and recorded the examples myself (Appendix J/Course materials). In the first year, I also used such aural imitation tasks at lessons, but left them to the students' individual practice in the second year, to give each student the change to choose their pace. The individual transcription tasks that the students prepared at the end of the courses indicated that the different students used somewhat different combinations of writing and playing when working alone. Some students mostly worked at the piano and imitated and played the exercises by ear, while others used the recordings for transcription in which they only checked their notations with the keyboard.

## **B) Occasionally used activities**

### **Analysis of music with scores**

I sometimes assigned the students harmonic analysis of notated music. I used short excerpts of piano repertory, such as Beethoven sonatas, or gave the students assignments to apply to their piano repertory. I also combined the reading and analysis tasks with activities involving singing and playing, having the students sing lower lines, play reductions of harmonies, and sometimes transpose extracts or reductions.

### **Rhythm exercises: reading, transcription and keyboard exercises**

The study of rhythm was mostly present in the course in connection with melody and harmony, as the students transcribed or sight-sang musical excerpts. Additionally, the students practised some technical rhythm-reading tasks and learned to read some rhythmically complex music examples, and I also included some dictations that focused on rhythm. In the spring, some lessons included polyrhythmic keyboard exercises, in which the students played triplets against an ostinato with two hands,

using pentatonic or whole-tone scales, which enabled them to divert their attention from the pitch dimension for a while.

### **Harmonisation of melodies with the piano**

In the first year especially, I sometimes gave the students folk-song melodies to harmonise on the keyboard. In the second year, this kind of work was more rare, since we devoted more time to written transcription. I was also aware that quite similar work was included in other courses, especially 'free piano', which was part of the music education majors' programme, and some written harmonisation in theory courses.

### **Improvisation tasks**

Many of the course tasks involved elements of improvisation, like the figuration of harmonic progressions and improvisation of polyrhythmic figures on given scales. The students also improvised phrases in modal scales by first singing a melodic phrase and then repeating it on the keyboard. Additionally, some tasks were extensively based on improvisation. The largest one was the improvisation of a classical period, in which we first reviewed some possible cadential and harmonic patterns as used in the musical examples during the previous lessons, and the students then composed their own period by first designing the cadences. The students' improvisations were then used in the group as material for aural analysis and imitation.

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