

Mónika Benedek

The Role of Piano Improvisation in
Teaching Harmony, Using Combined
Materials Selected from the Baroque
Period and Jazz Standard Repertoire

Towards a Comprehensive Approach



JYVÄSKYLÄ STUDIES IN HUMANITIES 249

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Esitetään Jyväskylän yliopiston humanistisen tiedekunnan suostumuksella
julkisesti tarkastettavaksi Historica-rakennuksen salissa H320
maaliskuun 28. päivänä 2015 kello 12.

Academic dissertation to be publicly discussed, by permission of
the Faculty of Humanities of the University of Jyväskylä,
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UNIVERSITY OF JYVÄSKYLÄ

JYVÄSKYLÄ 2015

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URN:ISBN:978-951-39-6149-7

ISBN 978-951-39-6149-7 (PDF)

ISSN 1459-4331

ISBN 978-951-39-6148-0 (nid.)

ISSN 1459-4323

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Jyväskylä University Printing House, Jyväskylä 2015

ABSTRACT

Benedek, Mónika

The role of piano improvisation in teaching harmony, using combined materials selected from the Baroque period and jazz standard repertoire: towards a comprehensive approach
Jyväskylä: University of Jyväskylä, 2015, 395 p.

(Jyväskylä Studies on Humanities

ISSN 1459-4323; 249 (nid.), ISSN 1459-4331; 249 (PDF))

ISBN: 978-951-39-6148-0 (nid.)

ISBN: 978-951-39-6149-7 (PDF)

Harmony teaching traditionally follows separate paths in mainstream classical and jazz tertiary music education, based on the distinctive stylistic features and idioms developed in different eras. Nevertheless, these genres do share a variety of common features, and the goal of this research was to identify and integrate particular elements of musical practice in order to advance combined harmony teaching of baroque and jazz styles. The main aim of the research was to explore the applicability of piano improvisation as a potential pedagogical tool in the combined teaching of baroque and jazz harmony and to investigate in what ways it supports the development of harmony knowledge and various musical skills. Following the action research strategy, the research was conducted in two cycles, and data were collected in two subsequent teaching courses with Finnish university students. Qualitative research methodology was applied to analyse the data from both research cycles. Study One functioned as a pilot study involving seven students and examined what kind of approaches the students and the teacher found the most applicable in combined harmony teaching. Data concerning students' previous experiences and the progress and challenges to learning harmony during the course were gathered from questionnaires, learning diaries, video recordings, and harmony tests for comparative analysis with the researcher's observations. Findings showed that the practical approaches i.e. improvisation, composing variations, and aural learning using existing musical examples were particularly successful in such combined teaching of harmony. Study Two investigated the applicability of piano improvisation as a teaching tool in combined harmony teaching, with nine students divided in two groups employing improvisation at different parts of the course. Harmony tests measured the development in students' harmony knowledge and aural skills. Audio recordings of improvisation tests measured the students' improvisation skills, with and without peer accompaniment. The observations supported by video recordings of the lessons examined the students' overall learning progress and development of musical skills. The students also expressed their opinions about learning harmony with and without improvisation via questionnaires. All data were analysed separately in each student's case and were presented as a chronological narrative of each student's learning progress, and conclusions were drawn from each case. The results showed that improvisation, especially with peers, positively influenced the students' theoretical and practical knowledge of both baroque and jazz harmony and their aural skills. However, students' existing knowledge of harmony in each genre; the starting level of their aural, improvisation, and piano skills; and the timing of the improvisation during the course also influenced the learning progress. Improvisation appeared to be more applicable to learning harmony once a certain amount of theoretical knowledge and aural and piano skills were first established. The students were motivated to learn harmony with improvisation and baroque and jazz harmony combined.

Keywords: harmony; baroque; classical; jazz; tertiary music education; improvisation

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ACKNOWLEDGEMENTS

First and foremost, I would like to thank my supervisor Docent (Adjunct Professor) Suvi Saarikallio for her endless support throughout my PhD. I am the most grateful for her mentorship and scientific guidance at every stage of my project, her interest, trust, encouragement as well as her patience from the very beginning of my PhD. I feel very lucky that she was my supervisor.

I am honored that this work has been reviewed by Dr. Anthony D. J. Branker and Dr. Tuire Kuusi. I wish to thank both of them for their interest in my work and for their supporting comments to improve my dissertation. I also convey my sincere gratitude to Dr. Anthony D.J. Branker for accepting to be my opponent at the public examination, and I also thank him for his kind suggestions and corrections of the language of the dissertation.

I highly appreciate all the help and valuable comments provided by Professor Petri Toiviainen and Professor Jukka Louhivuori during the whole research period. I am very thankful for Dr. Riitta Rautio, Dr. Erja Kosonen, Dr. Pekka Toivanen, Prof. Petri Toiviainen, Carita Holmström and Gabriella Szabó for their kind contribution to my data analysis.

I also wish to thank to all of my colleagues at the Music Department of University of Jyväskylä, especially for Prof. Jaakko Erkkilä, Prof. Tuomas Eerola and Associate Professor Esa Ala-Ruona for their continuous support my work and that they created a friendly environment in the Department. Also, thanks for the CoE group for their critical remarks at the research seminars, in particular Dr. Anemone van Zijl for methodology and suggesting me conferences, Dr. Birgitta Burger for helping me with the graphs, Dr. Marc Thompson for the correction of the title, Mikko Leimu for all the technical support with data, and an especial thank to Markku Pöyhönen for his endless practical support to feel more comfortable both at work and in life.

Further thanks Associate Professor Alex Ruthmann for providing me valuable reference materials, Prof. Karst de Jong for his important last minute remarks, Dr. Inga Rikandi, Carita Holmström and Dr. Assi Kartunen for observing the free piano accompaniment and baroque keyboard improvisation lessons. I also would like to express my gratitude to Prof. Gilbert De Greeve for his support of my first publications, to my former Professor Ildiko Herboly Kocsár for all of her encouragement to start my PhD and to Professor Emeritus Matti Vainio for his kind advise to conduct my PhD at University of Jyväskylä.

Finally I would like to thank to my great friend Prof. David Vinden for all of his support and encouragement to pursue my PhD, the corrections of language of the dissertation. Thanks the Vinden family for the lovely times in London. Also, a big thanks to my best friend Feodor Rita for her friendship and her countless help me in hard times. And most importantly, I would like to thank my father Professor Teofil Benedek for his belief in me and for his greatest support all my life. I dedicated this work to Him.

Jyväskylä 10.3.2015
Mónika Benedek

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1 INTRODUCTION

1.1 My motivation for conducting this research

My motive for investigating the common elements of baroque and jazz harmony teaching originate from my experience of teaching music in various fields for more than a decade, namely classical music theory, solfège-musicianship, music history and literature, piano for non-piano majors, and leading both classical and jazz vocal ensembles in jazz secondary (vocational education), and jazz tertiary music education. I was in a unique position in my native country, Hungary, as one of the very few people responsible for teaching all of these classical subjects to jazz students. In this position, I was able to develop various teaching approaches that suited my own investigative and curious personality. However, I also faced many challenges while applying the approaches that I had learnt from my classical music academy training. In Hungary, Kodály's pedagogical principles and philosophy are well established and place emphasis on musical literacy as one of the most important elements in classical music education. In Hungary, Jazz education at the tertiary level is a relatively modern phenomenon and follows Western trends, while simultaneously acknowledging Kodály's principles in the classical field. Nevertheless, the more established classical music education in Hungary has had an impact as performance of classical music (both on the main instrument or singing and on the piano as supplementary studies) and classical music theory are also compulsory components in learning jazz at tertiary level (albeit to a less extent than jazz subjects), as specified by the Frame Curriculum¹, which follows the Key Competencies of the Dublin Polyphony in the Bologna Process². According to this curriculum, a certain level of mastery in classical music theory is regarded as a prerequisite for undertaking jazz studies. For this reason, it was challenging to determine how to effectively teach these classical elements (especially music theory) in the jazz context so

¹ Előadóművészeti Alapképzési szak/8, page 242 – alapképzési_szakok_kkk100215[1] PDF, www.okm.gov.hu/felsooktatas

² Bologna Process – www.ond.vlaanderen.be/hogeronderwijs/bologna

that theoretical principles were taken on board while still giving students enough freedom so as not to feel confined to classical music theory. My main challenges were underlined by the fact that jazz students, in general, came from a far more diverse musical background to both vocational and tertiary training than students who usually come to the classical conservatory or academy. The backgrounds of my jazz students ranged from strong classical conservatory training to basic formal classical background with limited theoretical knowledge. However, in the latter case, the students' theoretical knowledge was usually accompanied with high musical and creative ability, especially with regard to improvisation.

When I was teaching in a jazz environment, I was keen to reduce the disparities in the knowledge levels between students in the music theory classroom. I reviewed numerous music theory and harmony books and teaching materials that I could get access to that covered both the classical and jazz genres, both written in Hungarian and English (mostly from the USA). I instinctively began to combine elements from jazz and classical music theory into my teaching to draw attention to both the features that distinguish as well as link the genres. I explored the similarities and differences in harmony notations and the general use of various chord symbols in both styles (Benedek, 2008) as well as identified common musical elements in certain baroque, classical, and jazz chord progressions, and drew parallels between particular baroque bass melody variations and jazz walking bass lines (Benedek, 2010a). I also found it beneficial to integrate aural skills and music theory with the history of music and piano lessons (compulsory piano studies for non-piano majors) and vice versa by extending stylistic boundaries. Furthermore, since improvisation activities were completely missing from my classical music education, I became interested in exploring it mainly with my students at the compulsory piano lessons. For instance, students improvised the melodies or walking bass on my chord progression accompaniments and vice versa.

During my PhD research in Finland, I became acquainted with other approaches and philosophies in music education, I realised that I had actually been instinctively, but unconsciously, following a model called "comprehensive musicianship"³ in my earlier teaching in the jazz environment. I realised, at that point, that I had somehow been on the right track before, yet I felt very far from my ultimate goal of establishing the kind of tertiary music education that could be applied across genres. During my previous teaching experience, I had observed that combining two styles (baroque or classical and jazz) in teaching harmony in the classroom as well as during piano lessons could motivate jazz students to learn different musical styles and broaden their understanding of theoretical principles. During the piano lessons, I observed that some of the jazz students seemed interested in improvising with music material other than jazz

³ The 'comprehensive musicianship' approach basically means the integration of various subjects (mainly literature, harmony, counterpoint, formal analysis, and additionally music history, conducting, orchestration, and keyboard skills) in the music theory curriculum, which otherwise are taught in separate courses (Rogers, 2004). (See Chapter 2.4 in more detail).

(mostly classical music). Furthermore, some of the non-pianist jazz students, who had limited piano skills, seemed to have been keen on improvising together on the piano, sharing certain parts of music (melody, bass, or chords) between each other. In this dissertation, therefore, I explored these integrated approaches together with piano improvisation through teaching two courses at The Music Campus of the University of Jyväskylä for students who, were for the most part, majoring in classical music.

1.2 Structure of the dissertation

This dissertation is organised as follows: In the theoretical background chapter, the terms harmony and music theory are defined to clarify how they are used in my research and how they are used generally (i). This is followed by an overview of (ii) the differences and commonalities between the traditions, idioms, and pedagogical approaches and tools of classical and jazz genres; (iii) improvisation as a common practice between the genres; (iv) different pedagogical methods and approaches and philosophies used to teach harmony in mainstream classical and jazz education at the tertiary level, with an examination of Michael R. Rogers's classification of curricular trends in the United States, and examples of curricular approaches from Finland and Hungary; (v) the different content and approaches involved in learning harmony presented in textbooks for both classical and jazz styles; and (vi) the existing studies on the methods, approaches, musical skills, and tools used in teaching both classical and jazz music, with particular regard to harmony and improvisation.

The theoretical background is followed by the aims of the research, research questions related to both studies (Study One and Study Two), methodology, and research strategy (action research), by which the research was conducted in two research cycles, based on two subsequent data collection-teaching courses Study One and Study Two.

Then, Study One and Study Two are presented in detail in two separate chapters. After each study, I discuss the main findings of the relevant study to answer the research questions.

In the last part, I summarise the entire research; discuss the limitations and role of the researcher in the research process; and provide suggestions for further research. Finally, I draw conclusions regarding how piano improvisation can be used as a functional pedagogical tool in the various subject areas of the tertiary music pedagogy.

2 BACKGROUND

2.1 Harmony and music theory – The use of terminologies

Harmony studies are integral to music education and can be taught in many ways because of a number of factors: musical style, geographic location, education system, experience and main academic focus of practitioners and students, and so on. In the Western music tradition, harmony is considered a part of the music theory discipline. Music theory is considered essential for certain professional levels of music training, as it is thought to be useful for understanding the relationship between the elements of musical texture. Quoting the Harvard Dictionary of Music (2003, p. 379) harmony refers to “The relationship of tones considered as they sound simultaneously, and the way such relationship are organized in time”. It can be classified in many ways, such as classical and non-classical harmony (Tagg, 2003), and, today, the term is even used interchangeably with certain chords. However, in the context of this dissertation, the definition of harmony will be the one found in the Oxford Dictionary of Music (2007), i.e. harmony refers to the treatment of tertian chords in tonal context. Tertian chords or tertian harmony can be applied not only to the European classical tradition as conceptualised in conventional musicology but also to various eras in jazz (see for instance Boling, 1993; Tagg, 2003⁴).

In this dissertation, I use the expression “classical harmony”, when referring to the stylistic features and treatments of chords and chord progressions seen in both the Baroque and Classical eras, whereas the term “baroque harmony” is used to refer solely to the harmony in the baroque literature. In jazz, I follow Tagg’s (2003) classification, whereby the different harmonic idioms referred to by me as “jazz” come specifically from the traditional, swing, and bebop era. Experts, such as Jackson (2002), define jazz harmony as “at least four distinct pitches – seventh chords, sixth chords and various extensions and alterations [] – rather than triads as primary building blocks” (see also Hume, 1998,

⁴ Tagg uses the word “tertial” for tertian harmony, see pp. 511-522 and 534-540. Both expressions are in use in the music terminology (see: Oxford Music Online).

p. 168; Ostransky, 1960, p. 61. Sarath, 2010; p. 90.⁵); accordingly, I use the term “jazz harmony” to refer to these chords. Furthermore, since these harmonies from jazz can be connected to one another, for instance, in a series of II-V chords, similar to the baroque and classical harmony, in which the chords have functional relationships with each other; I refer to both baroque-classical and jazz harmony as functional harmony in tonal context (Boling, 1993, p. 23).

2.2 Written and aural traditions – Differences and commonalities in the practices of classical and jazz music

In the last century, classical and jazz music studies have traditionally followed separate paths in tertiary music education, with each having had its own teaching method, approach, concept, and curriculum. Classical and jazz harmony teaching at tertiary level can also be approached from many angles, but the first concern is to understand the main stylistic differences between them. Both the classical (I use “classical” as a broad term encompassing the Baroque and Classical period of Western music history) and jazz genres originated in different eras and from different traditions. This means that each genre developed its own unique stylistic features and idioms that influenced the methods and approaches needed to teach them.

The fundamental differences between jazz and classical music, both in historical and educational terms, have been highlighted in a substantial number of studies in the existing literature (e.g. Bailey, 1980; Berliner, 1994; Gonda, 2004; Tanner-Megill-Gerow, 1992). The differences agreed upon are as follows: classical music, as well as mainstream classical music education, in the broadest sense (I will, understandably, be using these terms interchangeably in this thesis), relies traditionally on the written score. The main aim of mainstream classical music education is to teach to interpret the compositions mainly from the Common Practice Period, i.e. from the Pre-Baroque era to the twentieth century with the greatest authenticity. In contrast, jazz principally emerged from the oral/aural traditions of African American musical practises prevalent not only in the Central and West African and the United States’ but also in northern Latin American and Caribbean traditions from the late nineteenth century (Jackson, 2002, p. 92). Church and dance music also were influential, as traditional harmonies originated from this music, and the fusion of all of these elements with traditionally composed music came to be known what we call jazz today.

Jazz tradition is still more associated with ear-learning by which early jazz musicians learnt their repertoire (Berliner, 1994, pp. 28-29; Monson, 2002, p. 115; Jackson, 2002, p. 90). Jazz practice today still places emphasis on the listening

⁵ Most jazz theory or harmony books, however, do not describe what exactly they mean by jazz harmony or jazz chords, but they start presenting harmony used in jazz with the ‘basic chords’, which refer mostly the seventh chords and continue with the extended harmonies referring to the ‘advance jazz harmony’.

and adopting aspects of other musicians' techniques and developing musical ideas through improvisation. However, there are areas in jazz education, where the written score is as important as it is in classical education, for instance, ensemble playing requires competency in score reading. Also, the written score in jazz has its own notational rhythm (such as in swing); therefore, some textbooks especially target training reading skills in a range of jazz styles (Lipsius, 1996; Rizzo, 1989). At the same time classical music education also stresses on the importance of the well-trained ear, but here, the basic approach to learn musical opuses from the score still remain paramount.

While improvisation in jazz is considered a practice fundamental to the genre, it is somewhat neglected in classical performance and education. However, this was not the case in the Baroque era, when improvisation flourished as a practice. Later "in the Classical period the performer was still expected to be able to improvise spontaneously a whole piece - a fantasy, a sets of variations and, needless to say, cadenzas, as well as elaborating fermata points" (Dolan, 1996/4, p. 13). Figured bass realisation, mainly executed on the harpsichord, was one of the key techniques that emerged in the Baroque period. Improvising melody variations and embellishments beyond the customary harmonisation was also common practice then. Similar to shorthand notation in baroque, lead sheet symbols in jazz indicate only the harmonic frame of a composition, and, yet, improvising the theme and chord progression is the real-time musical activity that brings it to life (Sarath, 2010, p. 90; see also in Bailey, 1980; Gonda, 2004). By the eighteenth and nineteenth century, improvisation and shorthand figured bass had become less common due to the rapid developments in instrument design. While formerly the keyboard had been the accompaniment, it was now the solo instrument. In addition, while formerly a composer was someone who could also be the performer, conductor, improviser, and keyboard accompanist, he was now committing everything to the written score. This need for textual accuracy and rendering everything faithfully to score meant that a high level of virtuosity and technical skills among musicians was required, especially in the solo performances (among others influenced by the Russian School). This is clear when Martin (2002) cites Weber (1992): "since the mid-nineteenth century the art world of 'serious' music has been organized around the composition of 'works' and their performance in formal concert settings, and the identification of a 'canon' of 'masterworks' produced by the great composers" (p. 138). One result of this shift was the gradual disappearance of improvisation from the classical performance repertoire by the end of the nineteenth century (Kovács, 2011; Randall, 1993).

At the same time, in jazz history (during the twentieth century), there has also been a movement towards classicization at various times. These have involved, for instance, combining baroque or classical styles with jazz using more written scores for arrangements (Deveaux, 1998). However, jazz musicians today still focus on listening to live or recorded music and performing with other jazz musicians in order to learn the stylistic aspects of the genre, with the written score providing a framework for the main improvisational ideas, but they

also transcribe improvised solos from recordings for pedagogical purposes (Monson, 2002, p. 119).

In contrast, improvisation has mostly disappeared from the classical canon, except for church organists and harpsichordists specialising in baroque interpretation, who have been keeping the tradition alive over the last few centuries (Kovács, 2011, p. 50; see also Bailey, 1980; Dolan, 2005). Nowadays, improvisation principally features as a key part of specialist classical music studies in baroque keyboard and organ.

It seems that these differences between the traditions and idioms of classical and jazz music have also had an impact on the attitudes towards the musical skills on which classical and non-classical music place emphasis even today. This aspect was recently researched among classical and non-classical (popular, jazz, and Scottish folk) tertiary performance students and professional musicians by Creech et al. (2008). Their results showed that while classical musicians favoured technical, notation-based, and analytical skills, non-classical musicians favoured memorisation and improvisation.

2.3 Improvisation as common practice

Improvisation has always been a central topic in educational research on jazz performance (Berliner, 1994), but in the classical domain, there is still a long way to go until it regains its former prestige in music education and becomes as everyday as it was in the Baroque era (Dolan, 1996-1997, 2005). The reasons behind this lie partly in the definitions of improvisation. According to both the *New Grove Dictionary of Music and Musicians* (2001) and *The Oxford Dictionary of Music* (2007), improvisation is the “creation or final form of musical work, as it is being performed [...] without a written or printed score, and not from memory”. Sarath (1996) further describes improvisation as the “spontaneous creation and performance of musical materials in a real-time format, where the reworking of ideas is not possible”. If we go by these definitions, then it would be a challenge for classically trained musicians to improvise, as they have all been trained to play music from a written score. Monson argues that spontaneity is the only nature of improvisation, since “the sense of improvisation as elaborating upon something previously known is sometimes lost in this definition” (p. 114). Similarly, Kovács (2011) draws attention to the paradox of Latin expression “*ex improviso*” i.e. “without preparation” and the real nature of improvisation (p. 42). Dolan, who is devoted to bring improvisation “which we have lost” back to classical music practice also states that “improvisation means living interpretation that takes place in real-time, not just reproducing the learning process” but he also recalls Artur Schnabel’s definition where improvisation is a process that is “re-creating the text” (1996/1, p. 13).

Bailey (1980) differentiates between idiomatic and non-idiomatic improvisation as two main forms of improvisation: idiomatic improvisation “is mainly concerned with the expression of an idiom (or musical style) and takes its iden-

tity and motivation from that idiom⁶, whereas non-idiomatic improvisation is not connected, in particular, to any idiom such as baroque music or jazz. Therefore, non-idiomatic improvisation is usually associated with free-improvisation or open improvisation which leads to “collapse of the ‘rules’ governing musical language”⁷. Other researchers discuss improvisation from the perspective of not only the performers but also the audience, pointing out the importance of the improvisational context (Dolan, 2005; Kovács, 2011). For instance, the context for the church organ improvisation is the liturgy, in which the organists improvise during the services with particular purposes of “filling the gap” between certain events and actions (Kovács, 2011, pp. 51-52; Kingscott and Durrant, 2010, p. 138). In this context, the improvised “music draws heavily on pre-rehearsed material” (Kingscott and Durrant, 2010, p. 137).

Despite these various definitions of improvisation, it is commonly agreed that it is a prepared musical activity that sounds promising to the classically trained musician. Dolan also adds that “being thoroughly prepared is the only way you can have the inner freedom to create fresh interpretation while you perform. To apply this, you have to be more than prepared. For instance, when I am preparing for a concerto cadenza I work through the piece very thoroughly” (1996/1, p. 13). However, improvisation needs not only “great skills, devotion, preparation, training and commitment”⁸, but also “lifetime of preparation and knowledge”⁹. Kovács also emphasizes that “A musician's life cannot be complete without his own invention. Interpretation to the highest technical and musical level is only half of the way. The other half is creation [i.e. creativity] founded on a firm knowledge of musical theory with the instrument as its main tool. If these two aspects meet, one will support the development of the other¹⁰.”

These statements suggest that, regardless of style, improvisation can and should be taught as early as possible. Devotion and commitment cannot of course be simply taught, but once students are motivated to learn and practise improvisation, this activity could become something they do regularly for the rest of their lives.

2.4 Methods, approaches, and philosophies in the classical and jazz music theory curricula at the tertiary level

Referring to my experiences teaching classical music theory, aural skills, keyboard, and history of music in jazz vocational and tertiary music education, and my motivation for pursuing research integrating various approaches to harmony teaching in both the baroque and jazz genres detailed in the Introduction (Chapter 1), I thought it to be important to provide an overview about the major

⁶ Bailey, 1980, p.4.

⁷ Bailey, 1980, p.99.

⁸ Bailey, 1980, p.5.

⁹ Berliner, 1994, p.17.

¹⁰ Kovács, 2011, pp. 38-39.

methods, approaches, and philosophies in teaching music theory in both mainstream classical and jazz higher and tertiary music education.

Classical and jazz harmony teaching at the tertiary level is one of the segments of music theory, which can be approached from many angles. Music theory has usually been clearly differentiated into “jazz theory” and “classical music theory” or “classical harmony”. Within classical music education, the distinction between different eras or styles is not always made and the terms music theory, harmony, or analysis are used, broadly, to refer to the eras in the Common Practice period.

Tertiary classical music curricula differ worldwide with regard to their music theory goals or “learning outcomes”, the skills they require, and the careers they envisage for the students. Michael R. Rogers’ (1984¹¹) classification of a number of music theory curricula is organised for undergraduates in terms of philosophical orientation and pedagogical approach, provides a very detailed overview of the development of the subject since the mid-twentieth century. Although all the examples are from the United States, many of the principles can be applied to the European context. Interestingly, the perennial dilemma remains in terms of what the music theory curriculum should focus on and how it should be organised. The four pedagogical trends that Rogers determined in 1984 have hardly changed over the last few decades, resulting in an updated but unchanged 2004 edition where the original categorisation of pedagogical approaches remains the same.

The first and foremost approach, in which curricula differ is in either *integrating or separating* written and aural skills in the music theory program. This might seem a rather traditional and basic way to sort them today, but it gives an idea of the general consensus among pedagogues and practitioner musicians concerning music theory. In the European context, as an example (referring to my previous teaching experiences and the location of current research), I am looking at the Hungarian and Finnish curricular models for teaching music theory at tertiary level¹².

Both countries teach music theory and aural skills (i.e., solfège or ear-training) as fundamentally separate courses, in both classical and jazz tertiary level. However, the Hungarian classical tertiary music curriculum tends to integrate the aural skills into the music theory program more than its Finnish counterpart. In 2010-11¹³, the classical tertiary music theory curriculum in Hungary covered analysis, part writing, melody and counterpoint studies and form, and required some aural skills for dictation (mostly harmonic). In the Finnish tertiary music curriculum from 2010-11¹⁴, the analysis (including form and

¹¹ Rogers, M. R. Teaching approaches in music theory, an overview of pedagogical philosophies. 2nd ed. 2004.

¹² This is due to the author’s various levels of experience in teaching classical subjects (such as music theory, solfège/ear-training, history of music, piano for non-piano majors and choir conducting), especially in the context of a jazz vocational training that later became part of a university college in Hungary, and that the current PhD research was conducted in the Finnish music education system at university level.

¹³ www.lfze.hu/oktatas/a_kreditrendszer/bolognai_kepzesek

¹⁴ http://soopas.jypoly.fi/ooo/jaksotukset_asiosta.main

counterpoint) and the writing (part-writing) were separate courses however, and the dictation was formally not included in music theory studies as it was seen as a separate aural skill. At the same time in Hungary (following the formal Kodály approach to music education), solfège in the classical curriculum also focuses on musical literacy (i.e., sight-reading and dictation), but theory issues and form are always related. In Finland however, solfège focuses more on aural analysis, ear-training and dictation, with less emphasis on sight-singing.

Jazz education at the tertiary level in Hungary, clearly differentiates jazz and classical music theory within the curriculum, and classical music theory is nonetheless a compulsory subject (segmented in a similar way to the classical curriculum detailed above). Solfège mainly uses classical material to enhance musical literacy (following the Kodály approach), while ear-training focuses mainly on the aural recognition and dictation of elements from jazz music theory. In contrast, the solfège/ear-training part of the Finnish jazz tertiary curriculum focuses on sight-singing, dictation and the aural recognition of elements from jazz and popular music theory, with these sometimes being separate courses¹⁵. Classical music theory mainly deals with part writing and the voice-leading technique, whereas jazz theory is separated into elementary and advanced theory. Elementary music theory is combined with solfège in a comprehensive package for new students so that it integrates classical, popular, folk and jazz styles to target a range of musical skills. Meanwhile, at the advanced level jazz theory and harmony is studied in more depth using both score and aural analysis to probe further into jazz idioms.

In classical music education, following Rogers's classification, the second approach to arranging a music theory curriculum is, to use the concept (touched upon in the introduction) of '*comprehensive musicianship*' (hereafter referred to CM). This was developed over the 1950s and '60s in the USA, and regardless of integrating or separating the aural skills, it aimed to holistically include as many as four subjects in one, where before they would have been taught in individual courses. Besides literature, harmony, counterpoint and formal analysis, the curriculum would also include music history, orchestration, conducting and piano skills, using rehearsal and performance activities such as composition and improvisation. The philosophy of CM also focuses on real musical examples from real compositions in contrast to artificial exercises, and it includes any styles from all historical periods and cultures¹⁶. Regarding its principal features, including the four core subjects for the course (literature, harmony, counterpoint and formal analysis), the classical music theory model for education in Hungary seems to be more in line with CM than the Finnish, which isolates most of these segments. However, in other respects, the Finnish music curriculum is closer to CM than the Hungarian, because it includes musi-

¹⁵ Also in Sibelius Academy, curriculum in jazz performance studies http://www.siba.fi/en/home?p_p_id=3&p_p_lifecycle=0&p_p_state=maximized&p_p_mode=view&p_p_col_pos=3&p_p_col_count=7&_3_struts_action=%2Fsearch%2Fsearch&_3_redirect=%2Fen%2F&_3_keywords=jazz+curriculum&_3_groupId=0&x=0&y=0

¹⁶ See Rogers, 2004 p. 20.

cal styles from other historical periods in the classical music curriculum, for instance popular music, and offers optional studies in jazz. In contrast, these styles are isolated in the Hungarian curriculum. In Hungary jazz and classical music education have developed separately from each other. This is because Kodály's principles form the basis for the fundamental philosophy behind the music curriculum. Whereas in Finland, popular music studies are somewhat natural components of both classical and jazz music education, thus pop studies are formally included into the jazz curriculum and often labelled 'jazz-pop'.

The third approach, presented briefly by Rogers, is described as being based on *concepts* and *skills*. Reading music, analysing, discussing or thinking about music (concepts) are distinguished from more practical activities (skills) such as listening, singing, performing, transposing, arranging, harmonizing, composing or conducting (i.e., "learning by doing")¹⁷. By leaving this approach to the end, Rogers perhaps sees this as the least significant approach that distinguishes the curricula, however, I think it is of greater priority, as it is still a sensitive topic after many decades¹⁸. To decide which area a curriculum should emphasize (i.e., the 'thinking' concepts or 'doing' skills) is highly dependent on the desired learning outcomes, the level of students and the areas of expertise. For performance studies evidently more practical skills are needed, but learning concepts should not be restricted to only theorists, as a deepening of theoretical issues through, for example, score analysis even without any practical music activities may result in a deeper understanding of music theory for others too. The optimal situation would be to keep a healthy balance between a conceptual and practical approach in teaching music theory, in other words 'the golden mean' (p. 28). But if indeed such a balanced music theory curriculum is to be followed, it begs the further question of 'in what proportion'? There are writing skills to choose from, such as harmonization, arrangement, composition and part writing; and then there are aural skills such as dictation, transcription, and aural analysis; then there are the practical implementations of these (keyboard skills and improvisation); and a final consideration is that many of these categories will overlap at a certain extent.

Over the past few decades, Finnish music education has traditionally included popular folk and dance music in the curriculum (with a variety of stylistic influences). This is in line with the general emphasis in the Finnish curriculum on developing the aural and practical skills needed for singing and playing in bands, i.e., accompanying songs on guitar or keyboard. In this respect, per-

¹⁷ Describing the skills approach Rogers do not draw parallel between the "learning by doing" or any of the cognitive learning theories such as Bruner's "discovery learning" (Kane, 2006) or Piaget's "experimental learning" (White, 2002), although the listed musical activities naturally contributed to empirical learning.

¹⁸ This opinion is based on my personal experiences through observing numerous music theory lessons that met both ends (i.e. concepts and skills approach) in both beginner and advanced level in tertiary education for the past two decades. Whichever curricular trend is specified, the teacher's own teaching approach and pedagogical skills can influence enormously the outcome of course and the motivation of students in learning the subject. Student's negative experience in learning music theory for instance without listening, singing or playing a single note during the lesson may result in irreversible consequences towards learning music theory and music in general.

formance students at the tertiary level are more motivated use the skills approach, illustrated by the 'free-piano accompaniment' courses detailed below.

The Kodály's philosophy influenced music curriculum in Hungary also emphasizes this skills approach, but with special attention paid to reading and writing music. Furthermore, this is not only targets musical literacy of professional musicians, but also the society at large. Reading and writing music also requires sufficient aural skills, therefore all of these are emphasized in the curriculum. And now that jazz education has developed to a level within the Hungarian curriculum that corresponds to classical music, other practical skills such as playing by ear and improvisation are in great demand, even if this is mostly within the context of jazz and pop music¹⁹.

Regardless of whether one approaches a curriculum in terms of either concepts vs. skills, or comprehensive musicianship, the practical benefit of integrating keyboard studies into music theory teaching should surely be beyond question²⁰. Music theory curricula traditionally includes keyboard into the course program for the realizing harmonic progressions not only in written form but also in practice. However, the keyboard studies either in one-to-one basis or 'class' or 'laboratory' environment can support the music theory program even if the goals of such courses might differ slightly from the overall curriculum. Some piano classes stress the performance, ear-training, and sight-reading skills (technical playing skills), whereas others underline the importance of the practical application of music theory through accompaniment and improvisation (White, 2002).²¹

In both classical and jazz tertiary music education in Hungary, there are compulsory piano courses like this that are taught on a one-to-one basis. The classical curriculum highlights the performance skills of written compositions based on a baroque, classical, Romantic and twentieth century repertoire and may also include the transposition and reading of orchestral / choir scores²². Meanwhile in jazz, beyond getting familiar with the classical repertoire the compulsory 'piano studies for non-piano majors' course includes learning to play jazz standards and improvisations. In the Finnish curriculum (which includes classical, jazz- (pop) and teacher education) the 'free accompaniment' course, mainly using keyboard²³, has a unique position. It was originally developed as a form of one-to-one instruction, but recently became popular as group instruction (Rikandi 2012, pp. 27-28). The pedagogy behind a 'free piano accompaniment' course does not only teach students how to accompany songs

¹⁹ For the last two decades there has also been growing interest in learning popular music that has resulted in an increasing number of private schools and vocational music programs focusing exclusively on teaching pop styles in a similar way to the Finnish curriculum.

²⁰ Rogers, 2004, p. 69.

²¹ White, 2002, p.85. and see also Rogers, 2004, p. 69.

²² Zoltán Kodály's pedagogical principles emphasize the importance of musical literacy, the reading and writing skills.

²³ In Finnish 'vapaa säestys' means free accompaniment. One can use any keyboard instrument (such as piano or accordion) or guitar for the 'free accompaniment', but the piano is the most popular.

from notated chord symbols, but to play by ear through listening and improvising in various styles - ranging from folk through baroque and classical to pop and jazz. One of the aims of such piano instruction is also to apply music theory and ear-training as part of the practical training. Furthermore, as group tuition it also fosters learning from peers, as well as playing and improvising in pairs, instead of via conventional one-to-one instruction²⁴. As for jazz performance studies²⁵, similarly to the Hungarian counterparts, the keyboard studies for non-piano majors are offered one-to-one tuition and it focuses mostly on the realisation of jazz repertoire, jazz theory and improvisation. All in all, whatever model one takes (integrated or separated), and whatever the style, keyboard skills and the music theory curricula should be mutually coordinated.

Another way for distinguishing music theory curricula that Roger proposes, and which has not yet been mentioned here, is in terms of whether they follow a *historical* or *astylistic* approach. 'Historically' here would mean ordering the curriculum in a chronological way, whereas 'astylistically' would mean covering fundamental theoretical concepts irrespective of style and era. The value of chronological ordering is that it overlaps with the subject of music history (which may also be an important learning outcome), while the value of the astylistic approach is that allows links to be made between the various music theory elements in different eras or genres. This astylistic approach can thus be organized in various convenient thematic ways, for instance theoretical terms can be covered starting with the easiest and ending with the most complex, or in a multiple stylistic context (hence 'astylistic'), so as to choose musical pieces that are particularly relevant to particular theory issues and are well-known by the students (Rogers, 2004, pp. 25-27).

Whether one uses an integrated, separated, chronological, astylistic, conceptual, skill-based, or comprehensive musicianship approach, the music theory curriculum can be successful, as long as there is combination and balance between the approaches²⁶.

2.4.1 The music theory curriculum today

The reasons for the CM movement to lose popularity in the 1980s lay, at least partly, in the lack of music theory teachers who were able to foster such an ambitious curriculum, indeed to qualify music teachers to such a level had also become a challenge for teacher trainers. Another reason was the rapid development of computer technology that catalysed the emergence of so-called 'competency-based learning'. As a result most institutions began to reorganize the music theory curriculum by separating it back into its traditional components of, such as analysis, part-writing, ear-training, dictation, sight-singing and keyboard skills (Rogers, 2004; White, 2002).

²⁴ Rikandi, 2012, p. 24-35.

²⁵ <http://www.siba.fi/en/studies/degrees-and-programmes/jazz/study>

²⁶ Rogers, 2004, p. 29-30.

By and large, since the late nineties the growth and subsequent widespread use of computer technology and the Internet have had an enormous effect, not only on music theory teaching but also on music performance and education in general. There has been an expansion in the range of musical styles that are now offered in music education courses worldwide, so that they not only include pop and jazz, but also ethnic, vernacular and more (Green, 2008 p. 155-171; Davis & Blair, 2011 p. 128; White, 2002²⁷).

According to White (2002), for a “classical” musician, the most recent ideal music theory curriculum covers, to some extent and in varying proportions, analytical conceptual understanding, aural skills, sight-reading, keyboard skills (i.e. harmonization, continuo), and writing skills (i.e. part-writing, composition). Furthermore, he stresses on the importance of improvisation in the understanding of not only harmony but also aural skills: “The student who can improvise and compose a harmonic phrase using a secondary VII7 or an augmented six chord is better equipped to handle those sonorities in ear-training than the student who cannot do so. Similarly, the ability to write them, sing them, identify them by ear, or improvise them enhances a student’s ability to discover them and to perceive their meaning when they are encountered in examples from the literature” (pp. 7-9).

The jazz curriculum has begun to increasingly emphasize those skills, such as score reading or transcription, which traditionally belonged more to the classical music domain (Monson, 2002, p. 119).

All in all, this emerging global trend of combining elements once more in music education seems to have many traits in common with the one-time popular Comprehensive Musicianship movement and would seem to indicate that similar approaches might be regaining some ground.

2.4.2 Classroom versus individual instruction - Formal and informal learning, and the role of peer-learning

Even though Rogers’ classification of the main philosophical orientations in music theory curricula and White’s summaries of the recent trends in tertiary music theory programmes provide a thorough background to understanding the current situation, computer technology has had another impact on how the subject is learnt and taught. The burgeoning worldwide web has also provided one of the most effective ways of learning in an informal setting. This raises the question of how individual instruction via this medium might compare with the classroom. At the tertiary level, each adult student individually brings such a diverse range of knowledge and skills from either their classical or jazz background, that it might initially appear the most elegant solution not to have to even face the issue of differentiating learning outcomes in the classroom, if students can, by themselves, find exactly what they need to complete whatever was lacking in their individual music theory knowledge online. This can lead to a lopsided perspective however, as it might be the case that a student then over-

²⁷ White, 2002, p. ix. Preface for the Second edition.

compensates for that initial lack and begins to deal only with those issues that they might be interested in. Another danger is the lack of real-life feedback either from the teacher or from peers so that the student risks going off on their own trajectory to such an extent that they might even possibly lose their initial motivation. Nevertheless, these dangers should not be exaggerated, as music theory textbooks or online-tutorials can definitely help students to grasp the missing theoretical knowledge and skills they need. In the optimal case, both textbooks and online-sources should have content that is in line with the curriculum yet differ from each other in a practical sense. At this point the instructor's role comes to the fore: a creative, flexible and skilful teacher can easily soften the disparities between textbooks and the curriculum and will be able to capitalize on the students' greatest achievements, while a less accomplished teacher might have access to the best pedagogical approaches, tools and material sources, and yet still have trouble²⁸.

Besides the advantage of the presence of a teacher, the classroom environment also naturally fosters social interactions between students (or peers), where knowledge and skills can be shared. The popularity of applying informal learning approaches in a popular music context in the classroom, such as learning and playing by ear, listening to recordings, copying the playing techniques with peers, and improvising and composing together, is something that has gradually reached tertiary level music education from extra-curricular activities that often begin at the elementary level (Green, 2002). Rikandi (2012), for example, investigated peer-teaching and peer-learning activities in one particular context (a two-year course in free piano accompaniment at the Finnish Music Academy) and received positive feedback from the students for these kinds of activities in the classroom²⁹. Others have noted a growing success of classical tertiary programmes that adopt more popular music-oriented, informal, and peer-learning approaches, such as the Bachelor's music programme at an Australian conservatory (Lebler, 2008) and a university teacher training programme in the USA (Davis & Blair, 2011).

In contrast, in tertiary jazz education, there is a tendency to go the other way. In other words, it has become somewhat of a challenge to strike a balance between an ever-growing formalised (academic) approach and the informal approaches that originally characterised the genre (Jaffurs, 2006). This need for balance between formal and informal approaches may, however, have a positive side, as it usually results in a healthy conversation between the teacher and student at the tertiary level, whatever the genre.

²⁸ See Roger, p. 30.

²⁹ See Rikandi p. 107.

2.5 How classical and jazz harmony is presented in textbooks

As I already outlined in the Introduction (Chapter 1), when I was teaching classical music theory with a special focus on harmony for jazz students, I started integrating certain elements from both styles in my teaching in order to broaden students' understanding of music theory. I reviewed numerous textbooks of both classical and jazz music theory used in Hungary and in English-speaking countries, dating back to the 30s, for understanding the differences in the approaches in which these books presented the subject. In addition, I also searched for specific teaching materials that could be able to bridge the gap in classical (in broad terms) and jazz genres. During this time, I had started testing and implementing my own teaching material in the jazz tertiary music theory and solfège/ear-training curriculum, which supported my strong motivation to investigate further the common and different elements of harmony in this research. Therefore, I thought it to be essential to start my inquiry for identifying not only the various teaching approaches in harmony but also how classical and jazz harmony is presented in the textbook. I was also intrigued by the commonalities between the various teaching approaches, methods, curricular philosophies, and trends and the books that presented views on harmony. The second part of inquiry looked at what kind of harmony or music theory textbooks included improvisation in their concepts as well as what sort of textbooks would be able to provide tools for piano improvisation supporting learning harmony.

The content and approaches to theory and harmony studies in the textbooks are, to a large extent, differently organised for classical and jazz genres. Even though harmony studies only form part of the music theory discipline, the terms harmony and music theory are often used interchangeably in the textbook titles. The difference (with some overlaps of course) is that the majority of harmony textbooks generally focus on the treatment of chords in the classical canon covering the Common Practice Period and, sometimes, also a segment of the twentieth century, while the majority of music theory books principally cover most theoretical elements of music, regardless of styles. For the most part, the content of the textbooks, in terms of historical development, stylistic idioms, and interpretation is organised differently depending on whether the book caters to classical or jazz music students. Regarding the written tradition, the majority of classical textbooks with the term either music theory or harmony in their titles use with musical examples of, principally, score-analysis and writing exercises from the Baroque, Classical, and Romantic eras. In contrast, most of the textbooks for jazz are entitled "jazz theory" including online/computer tutorials, which indeed focus on the theoretical presentation of jazz harmony and its related elements in general (stock of chords, scales, typical chord progressions, etc.) i.e. "language of styles" to provide the appropriate tools for jazz improvisation.

In the following sections, with regard to "classical textbooks", I quote exclusively those works, which contain the term "harmony" in their titles and fo-

cus on the presentation of various treatments of harmony as well as those containing the terms “harmony” and “music theory” in their titles, covering either jazz or popular styles of harmony. Most books on “classical” harmony have also developed and revised their first editions (I quote only the first and last editions), and some of the differences in these editions are also explained.

2.5.1 Classical harmony textbooks

The majority of classical harmony books (both first and last editions quoted in this section) present the stylistic features of harmony through existent musical examples mainly from the Common Practice period and highlight the “rules” of voice-leading and doubling the chord progressions such as Aldwell & Schachter (1978, 2003) or Frank (1978, 1990, 2005³⁰). Some of them also touch on twentieth century music such as Kostka & Payne (1984; 2004), Lester (1982) or Ottman (1972; 2000). Meanwhile, a few of the “classical” music textbooks discuss the treatment of harmony in one particular style, for instance in the baroque (Hegyi, 1984), classical (Hegyi, 1985, 2008), or Romantic era (Bárdos (?) or Hegyi, 1988). However, most of the abovementioned books include part-writing, chorale harmonisation, and figured bass exercises, their approaches to harmony are different from the “traditional harmony instruction” that focuses on chords mostly in terms of their structure and relationship to other chords (Lester, 1982). Murrow (1995) identified the traditional approach as “common practice approach prior to 1962”, because those books were written before 1962 (in the USA) and usually focused on the “vertical orientation of progression of chords” and based principally on “contrived examples...” (p. 12)³¹. After the 60s, there were far fewer studies written using theoretical approaches and presented the stylistic characteristics of classical harmony mostly through contrived examples, such as Cser’s *Harmony and Musicianship* (1997), although it was written with the specific purpose to present voice-leading harmony through a relative sol-fa (movable-do) notation. Nevertheless, regardless of the approaches, I decided not to quote here any textbooks written before the 70s, since those books are generally not in use in the current higher and tertiary music curricula.

Referring to the notated tradition, most of the classical textbooks are primarily analysis-centred, but many harmony books include not only written exercises but also various ear-training exercises such as sight-singing, as all of these, in combination, have a positive effect on aural skills (Benedek, 2010b; Cser, 1997; Hegyi, 1984; 1985; 1988; 2005; Kraft, 1976; 1987). These approaches to presenting harmony are in line with the integrated curricular trends defined by

³⁰ In the previous section I claimed that I discuss exclusively of books entitled ‘harmony’. Frank’s works (1990) and (2005) are the exceptions from this, which, however, entitled ‘music theory’ are the successions of the reductions of harmony book from 1978.

³¹ Murrow (1995) examined 40 music theory books written in the USA between 1941-1992. The ‘common practice approach’ quoted here by Murrow is distinguished from the Common Practice period from which the books took the musical examples (see p. 12).

Rogers (2004, p. 16) in which the aural skills are integrated with the music theory curriculum (see Chapter 2.4).

Textbooks may also be written from historical and astylistic perspectives similar to what Rogers identified (2004, pp. 25-27). Motte's *The Study of Harmony: An Historical Perspective* (1981; 1991) presents the "rules of harmony"³², i.e. the treatment of chords and chord progressions and counterpoint, in a more chronological (historical) order covering all eras from the Renaissance to the twentieth century. Meanwhile, Kraft's *Gradus - An Integrated approach to harmony, counterpoint and analysis* (both first edition in 1976 and last edition in 1987) goes back to as far as the Gregorian plainchant, folk song repertoire, and various twentieth-century styles but discusses the various elements of music theory and harmony in a less strictly chronological fashion and organises the contents around certain theoretical topics. Both editions are based on Schenkerian analysis³³, which views the chord progressions from a broader perspective than the traditional approaches (Lester, 1982), and, as a CM harmony book, provides an anthology of music for analysis (through either listening or playing). The author also emphasizes that in the book, the "topics that have been taught in isolation from each other are brought together in one comprehensive whole", in which "the goal is total musicianship" (p. 2). Therefore, various skills such as listening; sight-singing; analytic, writing, and performing skills; and historical understanding are attained and developed. Nevertheless, the book places emphasis on the importance of composition and improvisation.

Following Murrow's taxonomy, Lester's work, *Harmony in Tonal Music* (1982), could also be seen as a Schenkerian analysis book, but it offers comprehensive approaches to harmony that integrate analysis, written, and aural skills.

Over the last few decades, the development of concepts in textbooks has been found to be strongly connected to the various approaches, methods, curricular philosophies, and trends of teaching music theory in mainstream classical music education. Although Ottman's *Advanced Harmony* (1972) was also classified as traditional or common practice according to Murrow (1995), the fifth revised edition is accompanied with a CD published in 2000 in order to provide a tool for the aural understanding of quoted musical elements and musical examples. Also, Ottman describes his text as follows: beyond the theoretical presentation of the harmonic materials from the "single triads through the seventh chords, altered chords, ninth, eleventh, and thirteenth chords etc., [] the comprehensive practical application of these materials is presented through analysis and composition" (p. vii. Preface).

Kostka-Payne's *Tonal Harmony* (2004) follows the traditional approach in the first edition in 1984, but the authors describe the recent fifth edition as more than a traditional book, containing a workbook, compact disc, software supplement for writing and ear-training exercises, an introduction of music from the twentieth century, and a few examples of jazz and popular music. Similar

³² pp. vii. About this Book

³³ Schenker's 'linear approach' to harmony (1954) based on the simplification and reduction the musical texture to the skeleton of the melodic lines.

innovations also refreshed the third edition of the otherwise traditional Shenkerian book *Harmony and Voice Leading* by Aldwell & Schachter (1978; 2003). However, Murrow actually called the first edition (1978) a “unique combination of traditional four-part writing and Shenkerian principles”³⁴ and the authors see it as a comprehensive approach to harmony, as it combines written exercises with composition. Moreover, Kostka-Payne’s *Tonal Harmony* (2004) also gives an overview of the fundamentals of music at the beginning of the book, but Aldwell & Schachter’s *Harmony and Voice Leading* (1978; 2003) presents this through the music literature.

The overlaps between approaches to harmony indicate that authors, scholars, or teachers might have quite different opinions regarding the contents and pedagogical orientations of various books. Owing to developments in software, reviewed, reworked, and reedited harmony books may display material in a brand new light, but the main issues in a music theory curriculum essentially remain the same and have not changed significantly during the last few decades (Rogers, 2004³⁵). Nevertheless, all harmony books either follow traditional instruction or CM approaches based on concepts as well as various musical skills, for instance keyboard skills (see Rogers’ concept-learning versus skill-learning approaches discussed above in Chapter 2.4). However, composition exercises or improvisation, i.e. the direct practical implementation of theoretical knowledge, is emphasized mainly in books that aim to provide a comprehensive approach to harmony and integrate the analytical, written, and aural skills (Aldwell & Schachter, 1978; 2003; Kostka-Payne, 1984; 2004; Kraft, 1976; 1987; Lester, 1982; or Ottman 1972; 2000).

2.5.2 Classical harmony textbooks including composition

Some of the harmony books that offer comprehensive approaches to harmony, quoted above in 2.5.1, stress not only on the part-writing and keyboard harmonisation of various musical textures, mainly from the Common Practice period, but also on various composition exercises. These harmony books also focus on the traditional voice-leading techniques while providing creative approaches to understanding the details of compositions. Furthermore, not all of these books suggest improvisation exercises, as most of the composition tasks especially related to the keyboard harmony could be realised in “real-time” compositions with the keyboard. Some of the textbooks’ approaches to the composition, detailed in the following text, together with the part-writing technique, could be used as improvisation exercises.

With regard to voice-leading writing technique and composition, Ottman’s *Advanced Harmony* (1972; 2000) focuses on the “instrumental styles of writing, based on the principles of four-voice writing (learned in the previous volume *Elementary Harmony*). This is applied to the realisation of Baroque-figured basses for solo instrument or voice with keyboard accompaniment, to

³⁴ See p. 187.

³⁵ See: Preface to the Second Edition

the harmonization of melodic lines in instrumental style, to setting texts for vocal solo and accompaniment, and to the composition of music for solo piano or solo orchestral instrument with keyboard accompaniment" (pp. vii-viii, Preface).

Lester's *Harmony in Tonal Music* (1982) approaches part-writing and composition through "step by step" procedures that "provide a stylistically appropriate framework within which the student's creative abilities can have free rein" (p. v, Preface). These approaches include writing and composing a melody to a given bass or a bass to a given melody, composing the inner voices of various chord progressions in keyboard or choral style not only in four but also in three voices, harmonisation of the given melody in various styles, such as keyboard accompaniment patterns, or harmonising a complete chorale melody. Furthermore, the work provided free composition exercises for a given model, such as meter, form, key, phrases, chord progression including cycle of fifths, or theme and variation on an existent melodic idea.

Even though Aldwell & Schachter's *Harmony and Voice Leading* (1978, 2003) as the title of book also indicates, "emphasizes the linear aspects of music as much as the harmonic, with relationship of line and line to chord, receiving as much attention as relationship among chords" (p. xi. Preface), the authors stressed that the book combined many other aspects of music such as rhythm, melody, counterpoint, and form. Therefore, the principal approaches to the part-writing and composition exercises were not only based on the voice-leading technique but also on other elements of music. The book is accompanied with a workbook in two volumes, which provide numerous writing and composition exercises. The most basic exercises are to complete unfinished melody and bass lines in various ways and to various extents on the given frame. Most of these frames consist of a part of a melody or bass (both figured and unfigured) either at the beginning, middle, or at the end of the given frame. Longer exercises target melody harmonisation in keyboard or chorale style or figured bass harmonisation in four parts, based on the given chord position. Composition exercises are also based on given outer voices, in which the inner voices are needed to be filled, or figures need to be added for the bass. Further tasks are to complete the two voices in keyboard setting, in which the starting themes are given, or to compose free two-part keyboard settings, for a four-voice setting. Chords need to be inserted in various chord progressions and harmonic progressions, and keyboard accompaniment patterns need to be completed. Some tasks involve composing harmonic progressions freely on a given melody, song, form, bass etc. in various settings such as keyboard or choral. Furthermore, various free melody and full textural compositions are also included.

Kraft's *Gradus - An Integrated approach to harmony, counterpoint and analysis* (1976, 1987) consists of various writing exercises based on the compositions from the Gregorian plainchant and the folk song repertoire up to the various twentieth century styles. The book's composition exercises also take ideas from various eras and techniques of various genres. "Tonal composition projects" include for instance two-, three-, and four-part counterpoint writing, compos-

ing a melody on a poem with a suggested meter, rhythm, chord progression with or without the skeleton of the melody, in which ideas for elaboration are also given; exercises embellishing melodies; composition of two or three voices against cantus firmus; soprano or inner voices writing exercises on bass patterns such as chaconne and passacaglia; composing variations on the given bass or polyphonic texture; folk-tune harmonisation; chorale composition in three and four voices with a given frame, melody, or tasks in which four-voice choral compositions need to be finished; two-part keyboard composition exercise; and composing imitative pieces, such as the canon. These exercises also aimed to explore melody harmonisation: keyboard harmonisation, chorale composition for organ, chorale composition for piano three hands and other instrument ensembles, finishing keyboard accompaniment on a given melody, and starting accompaniment patterns. Furthermore, more complex exercises are also included in the book such as composing piano pieces, songs with accompaniment in various instrument ensembles, or solo pieces according to certain forms such as ternary forms in all styles from the Gregorian plainchant up to the twentieth century composition techniques.

The textbook also consists of improvisation exercises in which singing is suggested. Various exercises are also based on scales, chord progression, or melody patterns, meant to be solved alone or with other students in question-answer format.

Overall, all of these part-writing and composition exercises offered in these books (and the list of books are not exhaustive) can also be used for melody, bass, and chord progression improvisation; such exercises facilitate the learning of harmony and application of the learnt information in practice.

2.5.3 Piano accompaniment books

The 'free (piano) accompaniment' (vapaa säestys) textbooks in Finland support CM in piano studies and provide music theory material to a varying extent. They usually have the rudiments of theory, such as classical and jazz cadences, rhythmic patterns, and chord progressions for various accompaniments - from baroque and folk through to rock, jazz, and latin-pop, etc. (Palmqvist - Nilsson, 1996; Pitkäpaasi-Silander-Viljanen, 1995). Some of them present the material in music theory terms (Jarvola and Sarmanto-Neuvonen, 1994), while others give less theoretical explanation and focus on musical examples (Hovi, 1996; and Vivo by Jääskeläinen, Kantala and Rikandi, 2007/2009). The latter keeps a balance between classical, folk, pop and contemporary music. Another recent work from Tenni and Varpama (2004) highlights the popular styles, and approaches the subject from the practical perspective of providing instant tools such as 'chord and rhythm patterns' for accompaniments and improvisation. In fact, many of the Finnish music theory textbooks (e.g. Creutlein and Louhivuori, 1982; Hampinen, 1994) are similar to the "vapaa säestys" books. They support the acquisition of practical harmony and musicianship skills, such as sight-reading and rhythm and ear-training, and use real examples from across the genres (baroque, classical, romantic, twentieth century, folk and pop). In addi-

tion, Creutlein & Louhivuori's work (1982) uses not only the piano as the main instrument for learning music theory but also the guitar.

Altogether, it seems that the piano accompaniment textbooks above can be used to a certain extent for learning harmony from the practical perspectives as well as for learning harmony with improvisation.

2.5.4 Jazz harmony textbooks

The first and most important difference between classical and jazz harmony books is that the jazz (perhaps for copyright issues) textbooks and computer tutorial programmes therein use only a limited number of musical examples and focus more on the theoretical presentation of harmony. Most of these books mainly aim to provide the appropriate skills and tools for improvisation, thus harmony is usually discussed in close relation to other elements of music theory, especially the scales. Scale theory has been developed and dominated since the 60s in jazz pedagogy (Aebersold, 2000; Backlund, 1983; Baker, 1988a; Boling, 1993; Dobbins, 1988a; Gonda, 2004; Honshuku, 1997; Levine, 1989a; Miller, 1996; Nettles, 1987; Reilly, 1993; Ulanowsky, 1988). Accordingly, "musicians typically learn up to 21 scales and their associations with particular chords in the jazz harmonic vocabulary", and the blues scales, which were used earlier, as well as the diminished and whole-tone scales, which were introduced by the bebop musicians (Monson, 2002, p. 123).

2.5.5 Jazz improvisation textbooks

At the same time, an extensive amount of teaching material is available for teaching improvisation in the solo context for piano (Dobbins, 1984-88; Gonda, 1996-1998; Levine, 1989b; Mehegan, 1964-77), for voice (Stoloff, 1996), for choirs (Gröger, 2009); and for more than one instrument (Baker, 1988a, 1988b; Crook, 1991; Bergonzi, 1992-2000). Most of these textbooks also give a summary of music theory. Regarding the approaches to improvisation, Crook, (1991) or Bergonzi, (1992-2000) provide tools for an 'astylistic' approach (patterns, frames, melodic permutations), while Baker (1988b), Dobbins (1984-88), Gonda (1996-1998), or Gröger (2009) offer approaches that go through all the major eras of jazz. Transcriptions of solos by jazz 'greats', such as the Charlie Parker Omnibook (first published in 1978) supports the learning of improvisation in various jazz styles. Furthermore, play-along materials, such as Jamey Aebersold's Jazz Play-A-Long series (which has been going since 1979) provide frames for improvising on chordal and rhythmic accompaniments.

2.5.6 Classical improvisation textbooks

Although improvisation is considered an integral part of jazz education, it is still less important in the classical context in individual instrumental training as well as the classroom environment (Apagyi, 2008; Dolan, 1996; 1997; Sarath, 2010). In fact, as mentioned earlier, classical improvisation features strongly in

only organ or baroque keyboard training, and it is usually combined with style-specific harmony studies (Kovács, 2011, p. 50). Boquet & Rebours (2006) offer approaches for practising figured bass and improvisation on the keyboard using renaissance and baroque material, but this material can be used for all instruments. Few classical music textbooks are based on both the “music theory” and “stylistic/idiomatic” approaches to piano improvisation (Stefanuk, 2008; Kaye, 2006). Similarly, only a limited number of studies in the literature are written for classical pianists and other instrumentalists for enhancing variation and improvisation skills without stylistic restrictions, e.g. in terms of melodic and structural frames, motifs, and patterns (Glaser, 1965), or which cover theoretical, idiomatic, and stylistic piano improvisations in all styles from the Baroque era to the twentieth century (Apagyi, 2008; Konrad, 1991). All of these sources emphasize exploring improvisation with the teacher or by forming groups of two students. Furthermore, compared to the jazz improvisation textbooks, the “classical” improvisation books highlight the context, i.e. the musical texture of improvisation and the music theory is presented mostly as background information.

2.5.7 Multiple-stylistic sources for learning music theory and harmony

Nowadays, music theory is being looked at from a pop music perspective. Tagg (2003) investigates popular harmony in both classical and non-classical contexts. Fitzgerald (1999), Wyatt & Schroeder (1998), and Zeitlin & Goldberger (2001) stress on practical musicianship, such as ear-training and keyboard musicianship, as the most important aspect of theory and offer a comprehensive range of materials to musicians of all genres. These sources have similarities with the Finnish “free piano accompaniment” textbooks; however, most of the piano textbooks include more classical material.

Despite the considerable amount of books on improvisation in jazz theory as well as the increase in materials in classical harmony, which emphasize the importance of composition exercises, very few refer to both styles and quote real musical examples in these genres (Aikin, 2004; Hume, 1998; Jaffe, 1996; Sarath, 2010).

Although there is a growing interest in examining music theory from many stylistic perspectives, improvisation is not very widely used, as evidenced in Sarath’s trans-stylistic approach for teaching music theory – *Music theory through improvisation – a new approach to musicianship training* (2010). The book is designed for classical musicians, but it offers comprehensive approaches for learning music theory to help understanding harmony by using improvisation in any instrument. Furthermore, while the book presents improvisation on certain elements of music without stylistic boundaries, it also offers tips to improvise on certain idiomatic chord progressions, for instance, II-V-I in jazz and cycle of fifths in both jazz and baroque.

2.6 Studies on the different teaching approaches, tools and musical skills

2.6.1 Studies on the development of various skills related to harmony and keyboard – Integrated courses in classical higher education

Learning harmony requires general and stylistic theoretical knowledge and a variety of musical skills. These consist of aural skills, such as inner hearing³⁶; practical skills, such as those needed to play an instrument; or sight-reading and score-writing skills (dictation and transcription), that require a mixture of both the aural and practical. In jazz education, most studies on the different teaching methods used have investigated the subject more from the perspective of improvisation. In the classical music context however, any improvement in aural, score-reading or score-writing skills are more likely to be linked with other achievements such as keyboard skills and music theory.

Keeping the goal of CM to the fore, Bogard (1983) tested first year college students to see how various musical skills developed during a theory training course for students where ear-training, sight-singing and piano playing were interrelated (experiment group), and for students where these skills were not combined (control group). A multiple-choice music achievement test (Aliferis) was used to measure how well melodic, harmonic and rhythmic elements of music were aurally recognized. In order to measure the effectiveness of the course, a music theory, ear-training, sight-singing and piano test were also administered before and after the course. Results showed improved rates of development in functional piano skills, indicating that an integrated (CM-style) music theory program had at least a positive effect on these skills. However, no significant differences were found between the groups' scores in the five post-tests, even if the experiment group made significant improvements in the Aliferis test.

Humphreys (1984) examined the applicability of an aural and performance-training program called the "Harmonic Skills Program", which helped students to master the piano skills required for accompanying simple tonal melodies with simple chord progressions exclusively by ear. Results showed that this kind of aural training had a positive effect on accompaniment skills, but none on the aural recognition of harmonic progressions.

Brown's study (1990) investigated the effectiveness of a semester-long piano course on aural skill development among undergraduate college students who were playing popular and folk song material and performing harmonic and melodic exercises by ear. The findings indicated that this kind of piano training significantly improved students' aural comprehension such as melody

³⁶ 'Inner hearing' is an aural skill term that could not be found in this form in the music dictionaries, but it is widely used among educators in various other forms such as *auralization* (Karpinski, 2000) or *audiation* (Gordon, 2007). Ilomäki (2011), who gives detailed sources of the various uses of the term inner hearing, describes it as a "skill of imagining or anticipating music that is not audibly present" (p. 20).

and harmony recognition, transcription, and melodic/harmonic play-by-ear skills.

Both Humpreys and Brown point out the problem that piano training generally relies on reading the written score, and that perhaps as a consequence, students with high performance skills generally show very poor aural recognition skills. Both of them therefore suggest the inclusion of aural learning (playing by ear) in traditional piano and music theory training. Humpreys furthermore suggests that improvising chordal accompaniments and teaching piano with an emphasis on melodic and aural skills will also have a positive effect on harmonic, aural recognition skills and performance skills. Meanwhile Brown examines the textbooks available in piano and keyboard harmony that include both theory and improvisation, and also points to the lack of books, which focus on playing by ear.

Recently, researchers seem to have been interested in exploring the aural skills related to other skills. For instance, Ilomäki (2011) looked at the effect of combining aural studies for music academy students by using a piano and found that this technique benefited the student's aural skills. She also reported that the students who had previously learnt music by ear and singing participated more easily in the aural skills course than those who had mainly experienced score-based learning. Parks (2005) tested the effectiveness of keyboard use on sight-singing skills among novice high school choir students in two groups. The programme used techniques associated with the Kodály Method such as singing with Relative solfa in both groups, with only one of the groups actually using the keyboard for the experiment to determine if it made a difference. The result was that sight-singing skills generally improved, but piano use showed no significant effect. Meanwhile, Kopiez & Lee (2008) examined aural skills as a component of piano sight-reading among university piano students, postgraduates, and professionals. They found a close relationship between the development of sight-reading skills, aural skills such as inner hearing, and practice-related skills.

2.6.2 Studies on methods of improvisation

Although improvisation is an integral part of jazz, it is still only a minor consideration in the context of classical music education, in both individual instrument lessons and the general classroom. Only a few studies have been devoted to exploring ways of teaching improvisation to classically trained musicians. Chyu (2004) looked specifically at improvisation for elementary- and intermediate-level classical pianists, Woosley (2012) examined it in the context of classical pianists and college teachers, and Lee (2000) studied beginner jazz improvisation for classically trained violinists. Woosley's work is a comprehensive summary of the best-known approaches to improvisation, making it applicable to a range of styles, such as baroque, classical, jazz, and popular music (p. 67). He also suggest a significant list of the ways in which classical pianists should learn improvisation. Lee also summarises the main approaches to jazz improvisation and gives tips to classical violinists on how to start improvising. Lee's

study also highlights the aural approach, i.e., listening, copying, transcribing, playing and singing along, and using theory as a tool for extemporisation. Furthermore, it provides textbook sources for violinists (and other instrumentalists) who want to enhance their jazz improvisation. In contrast, Chyu's study focuses on repertoire-based piano improvisation in written compositions from the Baroque era to the twentieth century. It, therefore, emphasizes the importance of reading and analysing notated examples of classical music through melodic variations and question-answer compositions. Theoretical approaches related to various musical styles and eras, such as improvisation on chords and chord progressions, are also explored. However, an entire chapter is devoted solely to exploring the characteristics of jazz in terms of melodic, basic chordal, and rhythmic improvisation; this is an approach to jazz harmony that is very "classical" and does not take into account the real stylistic features of jazz chords, in terms of inversion and voicing.

In his overview of the development of piano improvisation in the Western music history, Randall (1993) concludes that improvisation "closes the gap" between theory and practice. But without actually suggesting any pedagogical approaches to improvisation he states that a certain theoretical knowledge (beyond technical and creative ability) is also needed for proper stylistic improvisation. In addition, Chyu and Woosley agree that, beyond aural skills, a knowledge of music theory is a prerequisite for effective improvisation, but this is perhaps because they insist this works both ways - as improvisation in turn leads to a better understanding of music theory. As well as its effect on aural skills, Chyu also mentions the beneficial effect of improvisation on sight reading, but because score reading is the only approach that is explored in any depth, the study does not go on to give tips for aural learning, especially in relation to jazz.

Guderian (2008) tested the effects of using improvisation and composition tasks on fifth grade students who were learning recorder, to see if they might have a positive effect on their playing skills, their ability to read traditional notated score, and their basic theoretical knowledge. The results were inconclusive, however, - after 18 weeks of instruction, there was no significant difference between the results of the experiment group and control (who followed the same course minus the additional improvisation and composition exercises). The slightly higher rate of development for the experiment group in basic music theory was mainly due to those students who finished high and had a lower level to begin with. However, the study did at least conclude that improvisation and compositional tasks had no negative effect on either the ability of students to sight-read or play the recorder. The teaching strategy also included creative activities that motivated children to learn and to enjoy the lessons.

Research in jazz pedagogy principally focuses on gauging how improvisation is beneficial, and the various approaches, materials, and tools for teaching it. Watson (2010) evaluated the most recent studies in his summary of the effectiveness of aural instruction in jazz pedagogy (such as Flack, 2004; Heil, 2005; and Laughlin, 2001).

Flack (2004) reported on the usefulness of Aebersold's (1979) play-along recordings as a pedagogical tool, and how they helped developing the improvisation skills. Laughlin (2001) found that student success rates in aural activities had more of an effect than notation-based activities on improvisation skills. However, Heil (2005) did not find any significant differences between the effectiveness of technical and theoretical reading-based activities on the one hand, and melodic and imitative aural activities on the other. Both kinds of instruction helped equally to develop jazz vocal improvisation skills in high school jazz choir singers. Similarly, in another study in classical music education, Huovinen, Kuusinen and Tenkanen (2011) compared "theoretical" with "dramaturgical" approaches to improvisation among music pedagogy students and found that all that could be concluded was that each had its own characteristics. Theoretical instruction with chords and scales resulted in more "dissonant" improvisations that were played "independent of the chord changes", while the dramaturgical approach that looked more closely at melody and variation led to improvisations that were more "rhythmically varied".

With the growing amount of notated material in jazz teaching and thus increasing need for music literacy skills in jazz musicians, recent jazz research recommends both aural and notated instruction for learning improvisation, such as Huges's transcriptions of Bill Evans solos (2011). Nielsen (2013) describes the aural approach (listening and transcribing a solo) as the "traditional" approach in jazz, while learning a solo from the written score is more reminiscent of the way classical musicians learn.

Meanwhile, in the jazz domain, there is a wealth of literature that investigates improvisation from the perspectives of either the performance or pedagogy, the literature on this subject in the classical domain only seems to be growing. In classical music, written scores and historical records on the nature of improvised music provide the main reference for this, whereas in jazz, live music and recordings do so. However, there seems to be a lack of specific research on combining or comparing classical and jazz improvisation from the pedagogical point of view. Kingscott & Durrant's (2010) study is one exception (2010) that compared the role of improvisation in jazz piano performances vs. liturgical and concert organ performances from the perspectives of performer and audience. The study also offered few pedagogical suggestions as to how best to teach improvisation within these two idioms. According to the two interviewed practitioner musicians, the teaching approach in jazz "follows the traditional jazz tuition route" to learn certain "fixed musical ideas", vocabulary such as musical phrases, scales, and modes and also listening to and learning from other musicians' performances (p. 135). While for the church organist, improvisation is based on the "manipulation of the material within a style" that does not necessarily need to be original, the mastery of stylistic knowledge is important (p. 137). Nevertheless, practitioners in both areas agreed that "studying the work of other artists" is necessary to be a trained improviser (p.136). Monson (2002, p. 119) also refers to Berliner's milestone work *Thinking in Jazz* (1994), in which similar approaches to improvisation are listed in jazz as classi-

cal musicians learn the repertoire and traditional approach of improvisation by: i) learning the repertoire of tunes, ii) learning to embellish the melodies, and iii) learning to improvise in ensemble settings (see also Berliner, 1994 and Monson, 2002, cited in Kingscott and Durrant, 2010, p. 140; Woosley, 2012, p. 60).

Altogether, there seems to be a lack of specific studies on (i) combining baroque-classical and jazz styles in the teaching of harmony; (ii) investigating and developing the teaching methods and tools most applicable for teaching baroque-classical and jazz harmony, and (iii) exploring the role of piano improvisation in combined teaching of baroque-classical and jazz harmony. The current research intends to fill this gap.

3 METHODOLOGY

3.1 Aims

The main aim of this research was to explore the applicability of piano improvisation as a potential pedagogical tool in combined teaching of baroque and jazz harmony, in particular, in what ways can it support the development of harmony knowledge and various musical skills, such as accompaniment, aural and improvisation skills. The research intended to establish a teaching material that bridges the gap between baroque and jazz, such as the use of baroque variations that contain similar chord progressions as do particular jazz standards. Since the improvisation activities were based on particular chord progressions selected from the teaching material, the study looked how the various improvisation activities involving these chord progressions contributed to the progress in learning harmony. Peer improvisation techniques, in which the parts of music such as melody, chord accompaniment, and bass were shared between the students were examined to determine how they influenced students' accompaniment, aural, and melody improvisation skills with peer accompaniment and students' individual improvisation performances on the piano, and how they related to students' pre-existing knowledge of harmony and musical skills.

The general broader aim of this research was to identify ways of improving the curriculum for mainstream classical and jazz harmony studies at the tertiary level, by exploring and comparing the most applicable teaching methods, approaches, and tools. The research considered the traditional differences between the two genres from both historical and educational perspective, taking into account the organisation of textbooks in harmony studies, curricular philosophies, methods and approaches in music theory, and, especially, the lack of studies, which look at both classical and jazz harmony. The research, therefore, first identified certain distinguishing teaching approaches to harmony from each genre and examined their cross-applicability in a context that combined the genres in teaching harmony. At the same time, the research also intended to integrate the elements of musical practice shared by both classical

(including baroque) and jazz genres and traditions and then assesses the degree of their applicability in developing the knowledge of harmony in both genres and relative musical skills. It was assumed that this genre gap could be bridged in terms of the aural approach and the piano improvisation technique.

The more detailed aims of research can be found in Chapter 4.1 Aim of Study One, and Chapter 5.1 Aim of Study Two.

3.2 Research questions

The research consisted of two studies, Study One and Study Two. Study One explored the applicability of various methods and approaches in a broader sense, while Study Two particularly focused on piano improvisation as a teaching method. The particular research questions (also quoted in Chapter 4.2 and 5.2) proposed in the studies are as follows:

Study One

- 1) How do the different methods and approaches work in the combined teaching of classical and jazz harmony, such as integration of classical approaches into jazz harmony teaching versus integration of jazz approaches into the classical harmony teaching?
- 2) How did the students experience the different methods and approaches (such as how beneficial, enjoyable, and challenging they were for them)? How did the teacher-researcher perceive the applicability of the different methods and approaches in relation to the students' knowledge of harmony, various musical skills, personal experiences of the methods, and the different learning outcomes of the combined teaching?

Study Two

- 1) How can piano improvisation be used as a functional pedagogical tool for a combined teaching of baroque and jazz harmony at the tertiary level?
- 2) What elements contribute to making piano improvisation a functional teaching method for a combined teaching of baroque and jazz harmony, such as students' motivations to learning harmony, students' existing knowledge of harmony and musical skills, students' development of harmony knowledge and various musical skills, and peer versus individual improvisation techniques applied in different parts of the course?

3.3 Methodologies

The teaching methods and approaches including improvisation were to be evaluated in practice during subsequent teaching courses and the methodology chosen for this study was action research (Bannan, 2004; Cain, 2008; Robson, 2002; Somekh, 2006; Stringer, 2007). Action research or practitioner research works well in educational contexts, e.g. for developing the curriculum in music education (Bannan, 2004; Cain, 2008, Herr and Anderson, 2005), because the emphasis is on practice, i.e. "action". The researcher solves problems together with participants, who are the students in case of the current research. Action research consists of cyclical stages: research planning (i.e. identifying the problem, the aims and research questions), acting (i.e. teaching), observing (data analysis and validation) and reflecting (interpretation of findings) which together form a spiral of progress for as long as required. In each cycle, a new development to be tested is first planned (includes identifying the problem, proposing the aims, and suggesting possible solutions), carried out as "action", (teaching), observed (data analysis), and then evaluated (reflecting). Finally, the results from this cycle are fed into the plan for the next cycle of research and so on (see Bannan, 2004, p. 295). The methodology also allows the researcher and participants to conduct as many research cycles as required to resolve the problem.

The research in this study consisted of two cycles. The first cycle pertained to a general view of the topic, while the second cycle focused on specific aspects; in the following text, I will refer to these research cycles as "Study One" and "Study Two", respectively. Study One was originally planned as a first cycle of a series of research cycles according to the action research methodology. However, only two studies were conducted, in which the second was significantly longer in length, run in two parallel parts; furthermore, the study subjects (students), with one exception, were different from each other in the two cycles. Therefore, the second study (Study Two) was set as the main research because Study One investigated various ideas such as teaching methods and materials that were further tested in Study Two, so Study One functioned as a kind of a pilot study. Nevertheless, I treated this pilot study as a significantly important stage for both the research process as well as my personal learning. Therefore, the pilot study is presented in detail in the following text as Study One.

Study One looked broadly at what both students and the teacher-researcher considered to be the most easily transferable elements between classical (including features both from Baroque and Classical period) and jazz harmony and investigated the applicability of the various approaches to teaching harmony in both styles. The teacher-researcher based the inquiry on the students' previous experiences in music education and on their opinions about progress made in learning harmony and related musical skills. Students' preferences of the various teaching approaches, challenges faced by them in various activities, and motivation to learning harmony in both styles were taken into

account; then, all the data collected were summarised and compared with the researcher's observations on the matter.

Study Two focused on the more specific topic of improvisation, as the results of Study One pointed to the relevance of this approach. Study Two investigated the applicability of improvisation as a functional pedagogical tool for combined teaching of baroque and jazz harmony and, in particular, how improvisation had an effect on learning harmony and on the various musical skills. The study, therefore, also specified the applied teaching material and genres using only baroque and jazz excerpts as teaching material. In contrast to Study One, Study Two focused on the evaluation of the teaching tool's success from the perspective of helping students achieve their goals of learning harmony and gaining other musical skills, e.g. improvisation skills. The study involved observation of the teaching activities, measurement of the development of harmony and improvisation skills, and investigation of the students' opinions on the effects and benefits of improvisation during the learning of baroque and jazz harmony. The 'dialogue' between the various forms of data formed the basis of the validation of the findings.

Qualitative research methods were applied in both studies (Atkinson and Delamont, 2010; Boeije, 2010; Mason, 2002), as they offer various data collection and analysis techniques – such as observation, reflection via field notes, or content analysis of different texts. As I had extensive teaching experience in the field, conducting a course in harmony, combining baroque and jazz styles, was considered the most feasible means of data collection. In this way, I, as teacher and researcher, would be able to observe the students as participants reacting to real-world situations (Robson, 2002). The data would thus take the form of reflections on the teaching method, teaching material, and different tasks performed in class and would be the subject of continuous self-reflection. This study, like many qualitative studies, would involve only a few participants. To address this limitation, diverse data sources were used that allowed for a much deeper investigation of the topic. The detailed description of data collection, qualitative analysis techniques, and interpretation of the findings are presented in the relevant chapters pertaining to each study.

4 STUDY ONE

4.1 Aim of Study One

The primary aim of Study One (i.e. pilot study) was to identify the methods and approaches that distinguished between the teaching of harmony in both mainstream classical and jazz education and to examine their cross-applicability in harmony teaching in both genres. The study also looked at what kind of pedagogical approaches and tools could bridge the gap between the two genres, for instance composing and improvising, and how these approaches function in the combined teaching of classical and jazz harmony. Students' previous experiences in music education, their motivations for learning harmony, their preferences for various teaching approaches, their opinions about the challenges involved with various activities, and their progress made in learning harmony in both genres were taken into account, and compared with the teacher-researcher's own observations and evaluations.

4.2 Research questions

- 1) How do the different methods and approaches work in the combined teaching of classical and jazz harmony, such as integration of classical approaches into jazz harmony teaching versus integration of jazz approaches into the classical harmony teaching?
- 2) How did the students experience the different methods and approaches (such as how beneficial, enjoyable, and challenging they were for them)? How did the teacher-researcher perceive the applicability of the different methods and approaches in relation to the students' knowledge of harmony, various musical skills, personal experiences of the methods, and the different learning outcomes of the combined teaching?

4.3 Data collection

4.3.1 Participants

Data were collected through an optional teaching course of Classical – Jazz Harmony (MKAA060 valinnaiset opinnot³⁷), which lasted 7 weeks, with 4 × 45 minutes lessons per week at the Music Department of the University of Jyväskylä. The total number of teaching hours was 21 hours. Seven students (6 females and one male, four Finnish and three international) from the Music Campus of the University participated in the course. The participants were mainly Bachelor’s degree students and two students from the Master’s programme. To maintain anonymity of the participants in this study, pseudonyms have been used throughout the study.

4.3.2 Data sources

In spite of the limited number of participants and the relatively short length of the course, the diversity of data collected permitted deep and rich investigation of the topic. This improved the validity of the study, which originally was planned as the first research cycle of a series of studies according to the action research strategy. Nevertheless, Study One also functioned as a pilot study (Chapter 3), which tested various ideas such as the teaching methods, approaches, tools, and materials for the next research cycle (Study Two). Furthermore, the pilot study also tested the ways of collecting and analysing data and revealed the issues that needed to be addressed before conducting Study Two. Therefore, the process of conducting the pilot study played an important role in helping me to develop my own understanding, critical thinking, and practice in research in general.

Overall, the data sources for this study could be differentiated as follows: data gathered directly from students, and data from teacher observations and evaluations.

Each student produced written data in the form of four questionnaires: one before the course started and three during the course. Students were asked to write their experiences of learning progress (about tasks in the lessons and in relation to homework) in two learning diaries. Two harmony tests also were conducted at the beginning and end of the course which shed light on the development of the students’ harmony knowledge.

Furthermore, students discussed about the various tasks and approaches to learning harmony during the lessons. These discussions were video recorded and the relevant parts are quoted in the dissertation.

During the course, the teacher-researcher was able to observe the students’ reactions in real-life situations in relation to the teaching method, teaching material, and different tasks. Therefore, in order to provide self-reflections about

³⁷ In Finnish Optional Studies

the teaching procedure, data from the teacher consisted of 6 weekly teacher diaries, 7 individual lesson plans, observational notes on the 6 hours of video recording, and assessments of written and practical assignments (for example, homework exercises and any conclusions drawn from the outcome of harmony tests).

4.3.3 The procedure of data collection

4.3.3.1 Data collection prior to the course

Before the course began, a pre-questionnaire (Q Pre) was handed out to gather information about the students' musical background (Appendix A). It asked basic information about students' current studies (such as institution, major subject, main instruments, and grades obtained) and previous education (including the name of institutions attended, and the number of years they spent studying music theory, solfège, and piano in both classical and jazz genres).

The questionnaire revealed that the students tended to have far stronger classical backgrounds than jazz, at an average of seven years versus one year. The classical music training was obtained from music institutions; all of the seven participants studied classical music at a music school or conservatory or a university, and one also took private lessons, while only four students received formal training in jazz. Nevertheless, all of the students learnt jazz in different informal ways, e.g. from peers while playing in bands, books and computer tutorials, or the Internet.

The amount of time the participants had spent previously learning classical music theory ranged from 1 to 8 years, at an average of 4 years, while for jazz theory, it ranged from 0 to 3 years, at an average of 6 months. The length of time spent learning classical piano was between 2 and 10 years, at an average of 6 years, whereas only 2 students learnt jazz piano for 1 and 2 years, respectively. In addition, aural training, such as solfège studies ranged between 0 and 10 years for the group, at an average of 3.5 years. These results are shown in more detail in Figure 1.

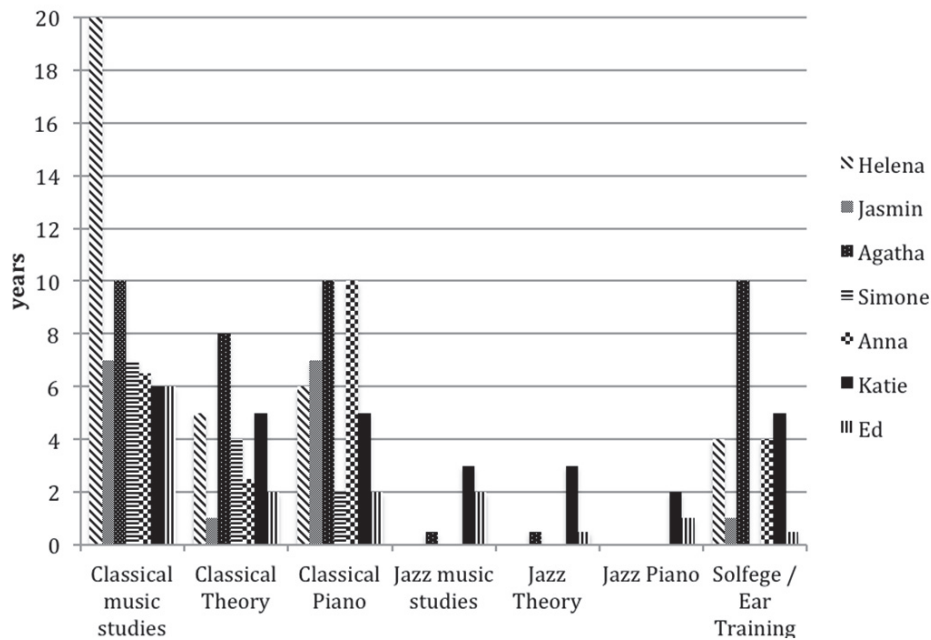


FIGURE 1 Students' previous education in years

This data had implications for the content of the pre-test material. The pre-test focused more on the stylistic features of classical harmony than on those of jazz. The knowledge related to classical harmony was examined broadly from the Common Practice era; therefore, baroque and romantic excerpts were also included in the test.

4.3.3.2 Data collection during the course

The written harmony pre-test from the first week's sessions (henceforth termed as Lesson 1) provided data about participants' pre-existing theoretical knowledge of both classical (covering Baroque, Classical, Romantic periods) and jazz harmony. This was done using the following writing, listening, and chord analysis tasks:

- analysis of a classical four-voice choral excerpt in Roman numerals (the composer was from the Romantic era, but the excerpt had classical attributes)
- analysis of the melody embellishment (identifying non-harmony notes) of a romantic piano excerpt
- part-writing a classical chord progression in four voices with modulation to the dominant key using Roman numerals
- part-writing a classical chord progression in four voices using figured bass
- analysing a late-Romantic excerpt using lead-sheet chord symbols
- analysing jazz chords (sevenths with and without extensions and additional notes) in close position from lead-sheet symbols

- writing jazz chords (sevenths with and without extensions and additional notes) from lead-sheet symbols in free voicing (in either close or open positions)
- writing jazz chords with added notes and extensions from lead-sheet symbols in free voicing (in either close or open positions);
- aural analysis, i.e. listening to and identifying four-chord progressions played on the piano (baroque, classical, romantic, jazz) to determine stylistic features that are different/common.

The harmony pre-test and key are specified in Appendix B.

After the harmony pre-test at the first lesson, a questionnaire (henceforth referred to as Q1) was given to each student, to identify their experiences, motivations, and goals in learning classical and jazz harmony:

- how students previously learnt harmony in general - by score analysis or by ear
- how students learnt classical and jazz harmony
- the formal and informal ways in which they learnt harmony
- the aim or motivation behind learning harmony
- differences in the ways students learnt classical and jazz harmony
- what students felt was the most effective and enjoyable way to learn harmony
- how they wished to learn harmony in the future.

An example of the actual questionnaire can be found in Appendix A.

The results of the harmony pre-test as well as of the first two questionnaires on students' educational background and learning goals had a direct effect on the final selection of teaching material and teaching approaches of harmony course (sections 4.3.4.1 - 4.3.4.2).

From lesson 2 (i.e. the four sessions of the second week) onwards, the students were asked to give their opinion on how challenging, enjoyable, and effective they had found the homework tasks and the various learning activities in both styles in the sessions. Two learning diaries (LD 2 and LD 3) were maintained by each student so that they could note down free-form comments after lesson 2 and 3, respectively (Appendix A).

After lesson 5 (i.e. the four sessions in the fifth week), another questionnaire (Q2) was distributed to determine students' preferences between the different approaches to learning, mainly jazz harmony, and touched upon some aspects regarding learning classical harmony. The questions aimed to get feedback about the techniques employed, such as score analysis, aural recognition, and practical music activity, as well as about the different kinds of sources such as written and audio sources used in the lessons. The questions also asked about the possible benefits of writing variations and improvisations and the various ways and situations that were adopted to feel comfortable when im-

provising: playing the piano alone or with peers and singing alone or with peers. Owing to teacher reflections and students' the feedback gathered in the first half of the course, the teaching material was being constantly refined focusing on the jazz material, so the questionnaire contained more questions on jazz. A full-length example of the questionnaire can be found in Appendix A.

The post-test for harmony in Lesson 7 (the last four sessions) provided data on the improvement of participants' knowledge of harmony over the course. Because the focus was on the ear-learning and jazz material during the second half of the course, the post-test consisted of different material from the pre-test, providing more relevant information on knowledge about jazz harmony and the development of aural skills:

- using lead-sheet symbols to identify cycle of fifth³⁸ and jazz II-V-I chord progressions (with colourations/extensions) through listening
- using lead-sheet symbols to identify jazz chords (sevenths with and without extensions and additional notes) through listening
- writing jazz chords (sevenths with and without extensions and additional notes) in close position from lead-sheet symbols
- writing jazz II-V-I chord progressions using piano-voicing from Roman numerals with colourations/extensions
- writing jazz II-V-I chord progressions in free-voicing from Roman numerals with colourations/extensions
- analysing a baroque Foglia theme and variation in Roman numerals, with identification of the non-harmony notes.

For the harmony post-test and key to it see Appendix B, and for a more detailed discussion of the post-test results see sections 4.5.4 - 4.5.5.

In the last session after the harmony post-test, the last questionnaire (Q3) was administered to the students to gather their opinions about the following:

- the benefits of comparing the ways classical (including baroque) and jazz harmony are learnt
- the most useful techniques for learning jazz harmony (e.g. aural recognition or score analysis)
- the most enjoyable as well as challenging approaches to learning both classical and jazz harmony
- the role of improvisation in learning jazz harmony
- further suggestions for different ways to learn jazz harmony.

A full-length example of the questionnaire can be found in Appendix A.

The lesson plans, the teacher diaries, and video recordings provided a massive amount of supplementary qualitative data about the learning progress and the application of different tasks in each session. The tasks included listening, playing, singing, analysing, score reading, writing (dictation or transcription), and improvising (individually or with peers). Video recordings of students' reac-

³⁸ Also known as circle of fifths.

tions and discussions about the various exercises or learning approaches also played an important role as background data. The parts of the video that illustrate some of the points made in the teacher's diary have been transcribed and are quoted in the relevant part of the results here. Lesson plans are included in Appendix C.

4.3.4 Planning the course

4.3.4.1 Selection of course material

The course for Study One aimed to teach aspects of harmony from both classical (particularly baroque) and jazz genres. Because the study also looked at what kind of pedagogical approaches and tools could bridge the gap between the two genres, I intended to implement the music material that would be able to help students find connections between the stylistic features of both styles. In preparation, I reviewed a numbers of different sources and theory books from both classical and jazz contexts and selected a variety of music excerpts in both styles that contained certain chord progressions.

Narrowing down the categories further, I found the baroque variations particularly valuable sources of those chord progressions, such as the cycle of fifths, which could be connected to certain jazz counterparts. The cycle of fifths chord progression was present in many of the researched baroque excerpts in many forms such as in triads or sevenths, root positions or inversions, and clear form or hidden by various melody embellishments. Another reason of focusing on the cycle of fifths chord progression was that it consisted of both II-V-I chord progressions in major and minor that are the core elements of jazz harmony (Benedek, 2008; 2010a; 2010b); therefore, these chord progressions could bridge the gap between baroque and jazz genres to a certain extent. Because this material was, partly, already used and developed in my previous classical music theory and solfège/ear-training teaching courses for jazz undergraduate students, I was especially curious of how it could be applied in a combined course and how students from different backgrounds would be able to enhance their learning of this teaching material.

Nevertheless, the relatively short length of the harmony course also influenced the choice of music for the teaching material. Examples from both baroque and jazz canon needed to be already somewhat familiar to participants and contain cycle of fifths or II-V-I progressions in a very clear form so that they could be easily compared (Tagg, 2003, p. 528). Therefore, mainly chaconnes and passacaglias from Handel and Pachelbel as well as one sarabande from Handel were chosen from the baroque (Hudson, 1981; Neumann, 1983), and standard songs dating from the 1930s-1950s, such as Autumn Leaves, Fly Me to the Moon, and Take the 'A' Train were chosen from the jazz canon (Boling, 1993, p. 71).

The various baroque melody embellishments were compared to the features of jazz by listening, improvising, and writing different variations of both chord progressions and melodies. The characteristics of bass variation in the

baroque variations were also compared to those of the jazz walking bass. Furthermore, chord progressions using seventh chords with particular extensions from jazz were explored by comparing the various voicings (three, four and five-parts) in open or close position to the traditional four-part voicing, principally known in the classical education practice. For lesson plans, handouts of musical examples, supplementary music theory material, and chord summaries etc., please see Appendix C. The sources of musical examples and the discography of audio and video recordings used for the listening, playing-along and transcription tasks could be found at the list of References.

4.3.4.2 Pedagogical approaches

Three mainstream pedagogical approaches were identified for the harmony course and the different kinds of musical activities involved in each approach are listed below. The approaches and activities were chosen after reviewing the relevant literature on curricular trends, pedagogical methods, and approaches used in teaching harmony in both genres, with particular emphasis placed on the theory books concerning the similarities and differences between classical and jazz musical practice and taking into account my teaching experiences in the subject.

- The *practical approach* included singing and playing the piano, playing/writing variations, playing along with the recording and score, improvising accompaniment, and improvising walking bass lines and melodies on the given theme and chord progression.
- The *aural approach* included learning by ear by singing and playing back the given tune, melody or chord progression of the musical excerpt as well as listening, singing, and playing along with the recording (without score).
- The *score analysis approach* included reading and analysing the various musical examples from the score and identifying chords and different chord progressions.

The activities I identified as practical approaches for my research resonated with the category of *skills* (such as listening, singing, performing, transposing, arranging, harmonising, composing, or conducting) that Rogers identified (2004, pp. 27-29). As the practical approaches fell under musical practices, so with regard to the aim of Study One integrating the various approaches to teaching harmony in both styles, I supposed that these would provide the best means for building a bridge between classical and jazz harmony studies.

The aural and score analysis approach, however, can be applied to teaching both genres, as they feature the musical practices differently. The aural approaches, i.e. learning the repertoires by ear, are characteristic of the traditional musical practice in jazz (Berliner, 1994, pp. 27-28; Monson, 2002, p. 115). As classical music practices as well as the classical music education rely more on

the notated music, score analysis approaches could be used frequently while learning classical harmony.

Based on the different ways of learning classical and jazz harmony presented in textbooks, I also identified the two mainstream strategies for learning classical and jazz harmony, i.e. *stylistic* and *theoretical*. Stylistic strategies presented the attributes of harmony through extant examples of music, while theoretical strategies first presented tools from music theory, such as chords, scales, and contrived chord progressions, that were used to practise the different styles, e.g. playing or writing baroque variations or jazz walking bass or improvising in each style. In other words, stylistic and theoretical strategies addressed the same subjects from opposite perspectives. According to the reviewed textbooks (see Chapter 2.5), the stylistic strategies generally seemed to be used more in teaching classical harmony, whereas theoretical approaches seemed to feature primarily in jazz harmony teaching, e.g. the use of tools required for jazz improvisation. My aim was to test the applicability of these two strategies in both genres and also to investigate how they worked in terms of learning by ear and learning through score reading/analysis. Therefore, I created the following eight sub-approaches:

- *stylistic strategy*: learning *classical* harmony by *reading* and *analysing* an existing musical excerpt
- *stylistic strategy*: learning *classical* harmony classical harmony by *listening* to an existing musical excerpt
- *stylistic strategy*: learning *jazz* harmony by *reading* and *analysing* an existing musical excerpt and jazz lead-sheet
- *stylistic strategy*: learning *jazz* harmony by *listening* to an existing musical excerpt and jazz tune
- *theoretical strategy*: learning the theoretical elements of *classical* harmony by *reading* and *analysing* the summary of chords or harmonic progressions from a textbook or tutorial programme (computer, CD, DVD, the Internet)
- *theoretical strategy*: learning the theoretical elements of *classical* harmony by *listening* to a tutorial programme (computer, internet) or textbook supplement (CD, DVD)
- *theoretical strategy*: learning the theoretical elements of *jazz* harmony by *reading* and *analysing* the summary of chords or harmonic progressions from textbook or tutorial programmes (computer, CD, DVD, the Internet);
- *theoretical strategy*: learning the theoretical elements of *jazz* harmony by *listening* to a tutorial program (computer, internet) or textbook supplement (CD, DVD).

The applicability of all of these teaching approaches were investigated during the lessons through various music activities in both genres both separately and combined by noting the students' comments and the teacher's observations and evaluation of the students' learning progress.

4.4 Procedure of data analysis

All the data gathered from the students and teacher were analysed using the qualitative content analysis method (Atkinson & Delamont, 2010; Boeije, 2010; Mason, 2002). The analysis of written sources such as questionnaires, students' and teacher's diaries, lesson plans, and video observations was supported by the Hyper Research software through coding and categorising the written notes, comments as well as the text transcribed from the visual data.

In the first stage of the analysis, all hand-written manuscripts such as students' comments in the questionnaires and learning diaries, teacher's notes in teacher learning diaries and lesson plans, and observations from video recordings had to be transcribed into the Hyper Research software.

Second, all texts sources were coded, taking into account the research questions, potential pedagogical approaches, trends, issues and musical styles described in the previous relevant literature. The main codes that resulted from this initial stage of analysis referred to the following:

- 1) teaching approaches such as AURAL, PRACTICAL, ANALYTICAL; teaching strategies such as STYLISTIC, THEORETICAL, SCORE-READING, LISTENING; and various tasks and musical activities such as SINGING, PLAYING the PIANO, SINGING & PLAYING, PLAYING ALONG or SINGING ALONG with the RECORDING, and SCORE, LEARNING BY EAR, RECOGNISING musical elements BY EAR, IMPROVISING, WRITING VARIATIONS etc. employed during the course
- 2) musical genres taught during the course, namely BAROQUE, CLASSICAL, and JAZZ
- 3) musical features studied during the course, such as CHORDS, CHORD PROGRESSIONS, HARMONY, SCALES, MELODY EMBELLISHMENTS, NON-HARMONY NOTES, ADDITIONAL/COLOUR NOTES, WALKING BASS etc.

The more detailed codes reflected the students' various preferences, challenges, musical tasks, and other types of experience (previous and during the course) and opinions related to the teaching methods and materials used during the course. A random selection of these sub-codes and code frequency by the Hyper Research software illustrates this diversity of labels in Appendix D. The process eventually resulted in a total of 158 codes for the entire analysis.

The codes were re-categorised many times during the analysis procedure according to their meanings in the various contexts. Therefore, it was important to compare and contrast the codes with the various contexts, as this resulted in new meanings of a code or a context. From these new categories, various new themes, i.e. new findings, emerged.

The coding procedure helped answer certain parts of the research questions, e.g. when students' opinions were summarised – how beneficial they found learning harmony with the practical, aural, and analysis approaches or the stylistic and theoretical strategies in both genres. The number of times each approach was mentioned favourably by the students either in their questionnaires (Q2 and Q3) or learning diaries (L2 and L3) was totalled and compared, and the findings were described both in numbers, percentages, as well as qualitatively. After analysing all data separately according to various themes (following the themes of research questions), i.e. students' previous education, learning progress, challenges and successes of certain learning approaches, and motivations, all the results were studied separately for each student in order to create a more comprehensive picture of each student and understand the reasons behind the findings. A short summary of students' individual cases are presented in Appendix D. Students' cases were also compared to each other and conclusions were drawn based on the commonalities and differences.

Certain data from the questionnaires, such as the years spent learning various subjects, or other multiple-choice answers, such as the way in which students felt comfortable to improvise, functioned also as quantitative data and were presented either as numbers or ranks in order of frequency. These data were compared to all other qualitative data, for instance the teacher's observations about the student's learning progress, and described as a background data for the students.

The two harmony tests, conducted at the beginning and at the end of the course, provided further information about students' levels of harmony knowledge before and after the course. The various tasks in both harmony tests were evaluated by their content and described in the teacher's diary and students' written cases. These text sources were subjected to the qualitative content analysis described above. The students' achievements in the tasks were compared and ranked in order of the accomplishments and conclusions were drawn for each task, taking into account the nature of the tasks and genre. Assessment scores were also given in percentage to each student. In addition, since the post test was also the final examination of the course, assessment grades also were given according to the University's assessment scale, i.e. *fail* = 0, *weak* = 1, *fair* = 2, *good* = 3, *very good* = 4, and *excellent* = 5.

In the last stage of the analysis, all the data were comparatively analysed and conclusions were drawn.

4.5 Results

The results of the study are presented in six parts. First, students' existing knowledge in both classical and jazz harmony and previous learning experiences are discussed as "pre-results" of the study; these results influenced the final choice of teaching approaches, activities, and materials for the course. The outcome of the pre-harmony tests provided the information about students' prior

knowledge of harmony, while the results of the first 2 questionnaires (before and at the beginning of the course) shed light on the students' backgrounds in music education, learning experiences in both classical and jazz genres, and the suggested approaches using which they wished to learn harmony in the future.

Second, I discuss the students' achievements in learning harmony by evaluating the results of the post-test, explaining the possible reasons behind the results, based on the teacher's observations of the lessons.

Third, I present how certain music activities such as improvisation and variation compositions helped to bridge the gap between baroque and jazz and how they helped students' to learn the stylistic features of harmony in both styles, from both the teacher and students' point of view.

Fourth, I report students' written feedback about the overall applicability of the practical, aural, and analysis approaches used during the course, i.e. the approaches and tasks the students found most beneficial, enjoyable, and challenging.

Fifth, I present the findings about the cross-applicability of stylistic versus theoretical strategies in both music genres, drawing attention to student' individual backgrounds, which affected their suggestions for the approaches to be used in the course as well as their performance during the course.

Sixth, I discuss how the students' musical skills and previous learning experiences influenced their performance of the various musical activities and their preferences for the different teaching approaches, by contrasting students' opinions with the teacher's observations of their learning.

4.5.1 Pre-results - How the students' existing knowledge and learning experiences informed the course material and activities

The final plan for the course material and activities was influenced by the results of the pre-harmony test as well as the questionnaire Q1 at the first lesson.

The overall results of the pre-test showed quite a diversity of knowledge among the students in general. I had assumed that the number of years they had spent studying these subjects, as stated in the pre-questionnaire, would have given them a higher level of classical knowledge of harmony than the level revealed in the test. Nevertheless, the tasks were generally performed successfully in terms of basic harmony and the classical features of harmony. Furthermore, student's basic jazz chord knowledge (seventh chords and additional notes) seemed to have been sufficient for the planned teaching material.

This summary is supported by the following comments about the outcomes of the pre-test, from the first teacher diary after the first meeting:

"The knowledge of the stylistic features of classical harmony seemed to be higher than that of jazz. However, the few students who were more confident in solving tasks in classical harmony, still had some problems in voice leading and voice-doubling. The part-writing with Roman numerals went much better than with the baroque-figured bass system, with which most of the students were unfamiliar. In contrast, lead-sheet symbols' knowledge was very high probably because of the popularity of pop-music in

Finland. There were only a few problems with the English terms when identifying non-harmony notes, which they, otherwise, recognised quite well. Their knowledge of jazz chords varied quite a lot but was good enough for them to be able to identify the various chords from lead-sheet symbols or from a musical context. The students also seemed to have succeeded in writing the chords in close position from the lead-sheet symbols. It will be interesting to see how they [students] will manage [to learn] the voicing and voice-leading of jazz chords during the course”.

The pre-test results highlighted that lessons two and three should have focused on the baroque variation material, with which students would have been more familiar. In parallel with this, an overview of the basic terminology for harmony, in general, was planned to foster a conducive environment for using jazz material and improvisation later on.

The results of pre-questionnaire (Q Pre) about students’ background of music education already revealed that classical studies had generally taken precedence over jazz studies. Students also studied classical music mainly in different institutions, whereas they learnt jazz in a rather informal way. Results from Q1 were taken after the harmony pre-test in Lesson 1, which also revealed students’ different learning experiences, motivations, and needs in both classical and jazz contexts.

On analysing and coding students’ comments, it was found that prior to the course all seven students had learnt classical harmony through score analysis and written exercises, whereas only two students had used this approach in their formal jazz harmony studies. Five students had experience of practical (live) musical activities such as singing and playing the piano either as a part of their classical harmony studies or informal jazz studies. Surprisingly, only one student mentioned practising these activities during formal jazz harmony studies. Only two students reported using aural approaches, such as learning any material by ear, in previous classical harmony studies, while only one student mentioned listening as an occasional activity during previous jazz studies; this was true for another student, but in both genres.

Some comments from the Q1 emphasized that there was sometimes a lack of connection between theory and actual music activities or examples. This point is illustrated by the contrasting phrases used: in the case of the generally more “compulsory” classical music studies, phrases like “paper work”, “theoretical”, and “has particular rules” were noted; on the other hand, in the case of the somewhat more “real” jazz studies, phrases like “hands-on work”, “practical”, and “no rules” were noted. The students’ overall learning experience of each genre and their motivations behind learning harmony was influenced by their previous learning of each different style, in a formal or informal way. Students’ responses about what they felt had been and could have been the most applicable and enjoyable ways in the current course for learning harmony were ranked in the following order of importance:

- 1) *Practical* training and learning from real music and musical activities, involving creative tasks like composing/writing variations and improvising in both styles
- 2) *Aural* training and learning by ear in both styles
- 3) *Score analysis* by comparing the classical and jazz genres for a better understanding of the musical features in both styles.

Overall, students had more experiences of learning harmony through reading and analysing score than through practical musical activities and learning by ear; therefore, they suggested more practical and aural approaches to learning harmony in both styles.

The first meeting after the pre-test already included a cappella singing and piano improvisation to test students' improvisational skills and to encourage (in particular) the less experienced students to freely express their musical ideas through a trans-stylistic strategy (Sarath, 2010). The themes for improvisation were limited to open fifths and a repetitive (groovy) minor pentatonic melody, using a "non-functional" harmony³⁹ played on the piano, which students could choose to improvise on by taking it in the direction of either major tonality, modality, the acoustic scale⁴⁰, or the functional harmony, such as the harmonic progression of blues.

Considering the results of questionnaire Q1, in which students suggested more practical and aural approaches to learning harmony in both styles, the tasks later on in the course focused on the various practical exercises such as playing, composing/writing, and improvising melody and bass variations on the piano on both baroque or jazz chord progressions, either alone or in pairs. Students presented their written works and were also encouraged to perform them on the piano.

However, from the fourth lesson onwards, the musical material consisted predominantly of jazz elements, and the various composition and improvisation exercises helped students better understand the connections between both styles, e.g. the similarities in the baroque basso ostinato and jazz walking bass. Furthermore, the core components of jazz harmonic patterns in standard songs were gradually compared to the baroque material (Lesson Plans see in Appendix C).

³⁹ Fitzgerald (1999) explains the relationship between grooves or rhythmic-chordal riffs and primary chords as being non-functional or 'embellishing' harmony in popular musical context: "chord movement [that] will often be used to provide harmonic colour and rhythmic interest as part of a repetitive groove" (p. 153).

⁴⁰ Acoustic scale is also known as Bartók-scale according to Lendvai (1971) who originated the scale from the harmonic series/overtone series (p. 455). The scale is also used in jazz as the IV mode of melodic minor.

4.5.2 Improvement in students' knowledge of harmony

In spite of the relatively short length of the course, the theoretical knowledge of all the students seemed to have increased in both styles. However, quantitative measurement of the students' skills before and after the course was not intended in this study, the pre-test and post-test of harmony allowed for any improvement to be quantitatively measured to some degree. The two written harmony tests were marked and scores were presented in percentages. Since the post-test was part of the research results and also the final examination for the course, assessment grades were also given to the students according to the University assessment scale, i.e. *fail* = 0, *weak* = 1, *fair* = 2, *good* = 3, *very good* = 4, and *excellent* = 5.

The information gleaned from the pre-questionnaire that students answered before the course began showed that the students had more knowledge of classical theory than jazz. The pre-test therefore was planned such as to contain more tasks related to classical harmony, such as analysing music scores and writing various chord progressions with correct voice-leading from both Roman numerals and figured bass. It was assumed that there would be enough findings from these tasks to fully cover students' pre-existing knowledge of classical harmony. With regard to jazz, there were slightly fewer tasks involving writing various chords such as seventh with and without various extensions and additional notes from lead-sheet symbols, followed by analysis of various chords from the written score and identifying them with lead-sheet symbols. Furthermore, only one task aimed to determine the students' stylistic knowledge of harmony and aural skills by identifying various chord progressions by listening and distinguishing between their stylistic traits.

In contrast, given the nature of the applied material and the students' progress in learning harmony during the course, the post-harmony test included more listening and writing tasks related to jazz. Therefore, the post-test provided slightly more relevant information on the development of jazz harmony knowledge. Nevertheless, a smaller segment of the harmony test was dedicated to classical harmony, involving analysing the chord progressions and non-harmony notes of a baroque excerpt.

The explanation of learning outcomes from the post-test was also supported by the teacher's observations (from the lesson diaries and video recording) of how the students applied their knowledge of harmony when, for instance, they played the material on the piano, composed variations, or improvised on various chord progressions in both the styles.

The most successfully accomplished task in the post-test was that of *analysing a baroque Foglia theme and variation by Roman numerals and identifying the non-harmony notes*, which was correlated to the students' general achievements in learning the stylistic features of baroque harmony through various practical exercises, such as writing variations. Students also found that learning the baroque variations by playing and singing or exploring the melody variations with composition and improvisation was beneficial. Another factor to the successful completion of the task was the dominance of classical music in most

students' educational background and previous learning of harmony through score analysis.

The second most successfully completed task in the post-test was *writing jazz chords in close position from lead-sheet symbols followed closely by writing jazz II-V-I chord progressions using piano-voicing with colourations/extensions from Roman numerals*. The other version of the II-V-I voice-leading task with "free-voicing" was completed slightly less successfully than its "piano-voicing" counterpart. In this task, the students could choose freely from the various starting positions and voicings, which they were more familiar with, but it seemed that most students were more confident in continuing the chord progression from the given position. The knowledge of voice-leading technique was also required for various practical activities such as playing and improvising the chord progressions; therefore, it was rewarding to see that most students had developed these techniques, especially with the piano-voicing by the end of the course. In the pre-test, students with only strong classical background performed well in these tasks.

The two listening tasks showed the most variable results in the tests, in which students needed to *identify the various jazz chords (sevenths with and without extensions and additional notes) and cycle of fifths and II-V-I chord progressions (with colourations/extensions by using lead-sheet symbols)*. The three students who had performed well in these tasks had also performed the best in the pre- and post-test, but those students who had only received informal jazz education and had less experience of the aural approach did not perform very well. At the same time, in the latter case, the students still managed to perform the II-V-I jazz tasks well when the task involved only writing. This finding could be attributed to their previous education, where they had learnt harmony by focusing more on analytical techniques.

With the predominance of a classical educational background, it was not surprising that the *baroque Foglia* analysis task was the most successfully performed task. Of note, the students performed the writing tasks that involved *jazz II-V-I chord progressions* very well. These tasks brought together music theory issues from both styles, such as voice-leading technique from the classical context and the II-V-I chord progression that is a core component of jazz. Moreover, understanding this chord progression with complex colourations or extensions demonstrated a more sophisticated knowledge of harmony than was required for writing single chords.

Probably, the most complex and difficult task of the post-test was *to identify cycle of fifths and jazz II-V-I chord progressions by lead sheet symbols through listening*. Despite the students' variable achievements in this task that were partly related to their limited aural skills and lack of theoretical knowledge, it seemed that they generally performed well. This indicated how the aural approaches used during the course had proved successful as well as how well the students were able to "*put theory in practice*", as many of them suggested it at the beginning of the course.

Overall, the success in certain jazz theory tasks such as the voice-leading of various chord progressions was not only directly related to their previous

jazz education but also indicated the benefits of students' extensive classical studies, which formed a solid foundation for learning jazz harmony. In addition, the relatively low success rate in the aural analysis task in the post-test could be attributed to not only their limited solfège and ear-training experiences but also to the fact that most of them had learnt harmony without using their aural skills. Therefore, students were more motivated to learn harmony with aural approaches, as they suggested at the beginning of the course.

On summarising the learning outcomes of the harmony tests, it became apparent that most students developed their harmony knowledge in both styles over the short course, but the students' diverse existing knowledge of harmony and various skills also had an impact on their performance in the post-harmony test. Nevertheless, it could be generally observed that various practical activities such as playing and singing, composing, and improvising were particularly beneficial approaches to learning harmony in both styles.

4.5.3 The practical approaches that helped students connect baroque and jazz harmony

The success of practical approaches in teaching harmony was observed in the lessons as well as examined in the results of the harmony post-test. In the following text, I explain the practical music activities that especially contributed to the learning progress from not only the teacher's but also the students' perspectives.

The idea and motivation behind this research was to plan a harmony course that combined elements from both classical and jazz genres in order to investigate the possible approaches and tools that could bridge the gap between the two genres. Since I selected certain baroque variations and jazz standards as teaching material, I intended to include improvisation and variation writing exercises as teaching tools in the course because they feature in both genres. I also intended to provide the means for students to express their opinions about how useful and successful it had been to combine aspects of harmony that both styles have in common. Did it help them learn, and if so, in what way?

Although some students found that writing variations was challenging in either contexts, whether it was baroque chord progression or jazz walking bass, all seven students felt that it was nevertheless helpful to apply the stylistic knowledge in real musical practice. Indeed, this task was brand new to all the students when they began to practise it from Lesson 3 onwards. Some of them preferred to write down the variations in a very detailed way, while others preferred only to sketch ideas and work them out on the piano. As the course progressed and students became familiar with the theory and the stylistic traits of baroque and jazz, by Lesson 4, the students seemed to have developed their variation compositions in terms of stylistic features in both genres. Teacher diary 4 reports what the students were achieving with these activities.

Jasmin

When she wrote the bass melody for a baroque variation, she not only used very typical baroque embellishments but also used particular features from jazz walking bass, for instance, scale-like melodic arpeggios of the chords. The part played by the right hand seemed to be composed carefully, especially the written slurs of quarter notes, which resulted in a fine syncopation. Only the last bar sounded a little bit weird, but all in all, it was great.

Agatha

The sketches she wrote for improvising the theme and variations were excellent. She played the chords mostly with the right hand and bass with the left and focused most of her attention on the baroque embellishments. I especially liked the dotted and syncopated eighth notes for the right hand, which allowed her to instinctively change the style when the bass variation required it, while, all the time, keeping a good pulse.

Ed

He wrote only one baroque variation using the figured bass in 4/4 time, which sounded interesting. The rhythmical solutions, however, were simpler than those of the others students', consisting of continuous eighth-notes in melody starting on the upbeat of the second beat of each bar. He also applied the melodic minor at the end, which was stylistically accurate but the melody needed to be refined in order to lead the leading note properly. It was a good start; he was also encouraged to practice more and write another variation.

Improvisation was an activity new to most of the students, so it presented more challenges, which they experienced differently. Students had diverse experiences of improvisation in various contexts and diverse levels of improvisation skills, which were also influenced by their accomplishments in playing the piano. With regard to composing variations, students had more time to practice and incorporate what they were learning from the course into their written work.

Nevertheless, students gave overall positive feedback for learning baroque and jazz harmony combined. Ed, for example, not only found the activities such as improvisation and variation composition "excellent", but he assumed that certain aspects of both styles could be combined: "it was so helpful to connect baroque voice-leading to jazz chords! I learnt so much. Really. Writing them out [the voicing] was work, but well worth it..." and he added, "as this course skilfully emphasized, it is not beyond any stretch of the imagination to understand them as one and the same".

"I think it was a good thing to see the connection with baroque harmony, since I have a classical theory background. In other words, there was something previous to build on" (Helena).

"The walking bass connection was helpful" (Simone).

"It was very interesting when I found similarities in both theories [...]. Baroque is not so familiar to me, but I could still hear similar things in it" (Katie).

Other students had neutral opinions about the subject, for instance Jasmin found these exercises “...only interesting”.

Anna emphasized, “I had heard that there might be a connection, but I really did not analyse it before this course, and now I think I have a more comfortable view of improvisation”.

Overall, findings showed that variation composition and improvisation exercises were successful tools for learning baroque (classical) and jazz harmony combined. Despite of the various challenges and achievements in these exercises, students generally felt that variation composition improvisation exercises positively contributed to understand the relationship between baroque and jazz harmony.

4.5.4 The overall applicability of the practical, aural, and analysis approaches

To provide an overview of the students’ overall opinions about how beneficial they felt learning harmony with the practical, aural, and analysis approaches was, the number of times each approach was given favourable mention in either their questionnaires (Q2 and Q3) or learning diaries (L2 and L3) was totalled and compared. The practical approach was found to be the most beneficial approach with 57 positive mentions, followed by the aural approach, with a total of 44. Meanwhile, the analysis approach was only mentioned in this context 31 times.

Overall, by the end of the course, most students found those approaches the most beneficial that they suggested for learning harmony at the start of the course, in most cases, the practical approach. Practical approaches covered those activities in which the theoretical information was learnt “*by doing*”, as Katie noted. This approach covered various exercises, such as singing, playing the piano, writing variations, or improvising a given theme or chord progression. Simone also commented that “*I found playing the piano [one of] the most effective ways to learn about jazz harmony. I also found singing, playing, and listening to jazz classics very effective*”. Referring to improvisation, Agatha remarked, it needed “*more practicing [sic] but it was helpful*”, while Ed stated, “*for me, it was necessary. I think participation should be mandatory*”. Two students who found that improvisation had a beneficial effect on their aural skills, and vice versa, said “*...when improvising you hear what kind of chords go well together and what [kind do] not*”, while Jasmin pointed out that “*... you use the chords immediately*”. Agatha described writing variations as being another practical approach, as she explained it as being “*the most successful way to understand and practice baroque or classical harmony*”. A few students, acknowledged the usefulness of the aural and analysis approaches after the course, but they had not suggested using these approaches at the start of the course.

Six of the students specifically emphasized aural-learning as the most beneficial approach, such as learning tunes or chord progressions in both styles through listening. Ed stated, “*[it is] very important to connect what I hear others play with what I play myself*.” While aural tasks were not among those mentioned in her previous education, Anna described how she had begun to adopt these

techniques by the end of the course: *“In the beginning of learning jazz, [due to] my previous study of classical music, I was more comfortable just using the lead-sheet. But after some time, and, of course, [...] I started to use the aural approach as well.”*

Finally, even though score analysis was the least suggested approach in the questionnaires and learning diaries, its usefulness was still acknowledged by some of the students, such as Helena: *“It was also good to see the chords written down on [the] music sheet (I am a visual learner). I think it was also useful to read and analyse jazz chords from lead-sheet music because it helps to learn and pick up chord progressions used in real life and there is a melody to the chords.”*

The preferences for one particular approach over another were also influenced by emotional factors such as what kind of tasks the students enjoyed the most. All seven students mentioned that they enjoyed the practical activities that involved either piano playing, singing and playing, playing along with recordings, or improvising in both jazz and classical styles. Aural tasks such as listening to jazz tune or recognising harmony from piano was also favoured by three students. On the other hand, Anna remarked on the interesting aspect of applying different theoretical issues and techniques in practical music activities: *“In jazz, [when I was] trying to make a walking bass line and also use chords with a different voicing, it was amazing how you can categorize jazz music when you find out those different voicings. In baroque, the most enjoyable thing was making variants on a theme and a chord progression.”* Beyond writing and playing variations on themes and chord progressions, Agatha also evaluated the score analysis as a pleasurable activity. Katie enjoyed discovering parallels in the approaches: *“I think it was very interesting when I found similarities in both theories...”;* meanwhile, Ed found that *“in a safe and supportive learning environment [...] every ‘mistake’ is a pleasure”.*

Nevertheless, it appeared that the students made a mature distinction between enjoyable and useful approaches. This is illustrated by their comments that nevertheless referred to score analysis as a beneficial method, even if it was not ranked as one of the most enjoyable activity. Overall, the findings indicated that the students’ suggestions about approaches were influenced by the absence of those approaches in their previous education, and their preferences for certain approaches at the end of the course were influenced by the applied approaches during the course.

4.5.5 Comparing the applicability of teaching approaches from “stylistic” and “theoretical” perspectives

Stylistic and theoretical strategies offered novel ways for examining the practical, aural, and analytical approaches from different perspectives. The stylistic strategy focused on learning the key features of both styles by either reading scores of existing musical examples or listening to the music (both live and recorded). In contrast, the theoretical strategy presented an overview of the fundamentals of harmony, i.e. a summary of the chords and contrived chord progressions, and how this should be applied in practice, for instance writing baroque variations or improvising in a jazz style. As mentioned in section 4.3.4.2, eight sub-approaches were created to test the cross-applicability of the stylistic

and theoretical strategies in both genres. Similar to the result of practical, aural and analytical approaches (in paragraph 4.5.4), to provide an overview of the students' opinions about the cross-applicability of the eight sub-teaching approaches, the number of times each approach was given a favourable mention by students in their questionnaires, learning diaries, and video recordings was totalled and compared (Figures 2A, 2B, 2C).

Findings indicated that the most successful sub-approach to learning both classical and jazz harmony was the stylistic strategy, with 58% of favourable comments (Figures 2A and B). This means that students preferred learning harmony by using "real" musical examples over using the theoretical approaches. For instance, Jasmin explained at the lesson 5 video discussion, "...you have like [] C7, then like you somehow identify that this is from that song" because "just to play the chord, then sing it [] just takes longer time" than learning harmony by connecting them to the real music.

Within the stylistic strategy, however, fundamental differences were found between the preferred ways of learning jazz and classical styles. In the classical styles, score reading and analysis of existing musical examples (with 18% of all positive comments, e.g. Agatha mentioned "singing, reading score, playing on the piano" were preferred over listening to compositions (with 11% of favourable comments) (Figure 2C). In jazz, however, aural approaches such as listening to "jazz classics", as Simone noted, were preferred over reading music from lead-sheet scores (with 20% and 9% of all favourable comments, respectively) (Figure 2C).

The theoretical strategy was more beneficial for learning jazz harmony than classical harmony (with 24% and 16% of favourable comments, respectively) (Figure 2B). Anna stated: "for me, the first step (in terms of understanding and getting the sound) is harmony. So, for me it is easier to know the harmony first to be able to improvise".

When learning either the jazz or classical theory, there were no notable differences between the reading and listening approaches (Figure 2C). Nonetheless, Helena was more comfortable learning jazz theory, and liked "to listen to the chords and chord progressions [...] while] trying to figure out the type of chord".

Figures 2 A-C below illustrate students' preferences for *Stylistic* and *Theoretical* strategies.

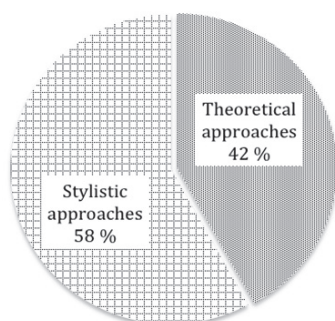


FIGURE 2A Students' preferences for *Stylistic* and *Theoretical* strategies

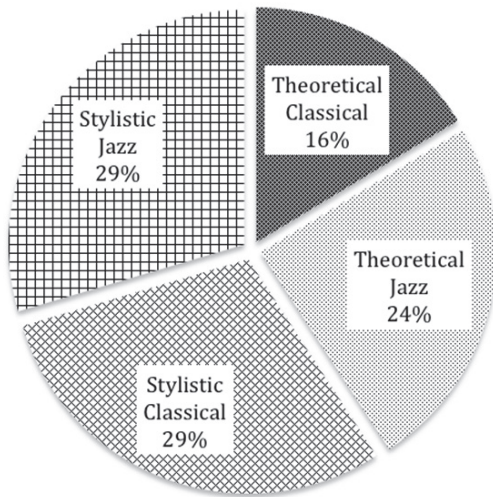


FIGURE 2B Students' preferences for *Classical* and *Jazz* styles within the *Stylistic* and *Theoretical* strategies

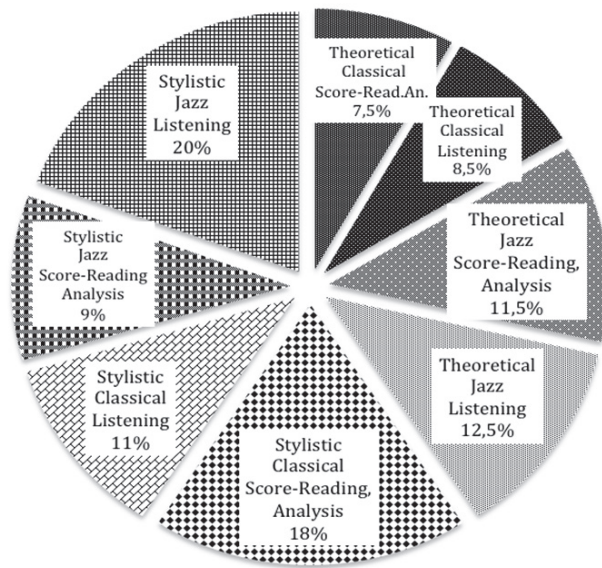


FIGURE 2C Students' preferences for the different sub-approaches, i.e. *Score-reading*, *Analysis*, and *Listening* within the *Stylistic* and *Theoretical* strategies in both *Classical* and *Jazz* styles.

The findings generally reflected students' previous education, their suggested approaches at the beginning of the course, and their preferences for learning via practical, aural, and analysis approaches at the end of the course.

The preference for learning harmony through existing musical examples in both styles over the theoretical elements show that the students' general motivations for learning harmony are connected to live music activities or learning "by doing", for instance playing/singing with the piano or exploring improvisation and written composition exercises. However, the relatively high preference for learning the theoretical elements, especially in jazz, still reflects the influence of most students' previous informal learning experiences, for instance, learning chords or particular chord progressions from books, online-tutorials, or friends.

The overall genre distribution in both stylistic and theoretical strategies and the preferences for aural or score learning were found to be connected to students' previous studies in classical and jazz music. All the students tended to have stronger classical background than jazz, and they learnt classical harmony mostly through score reading and analysis. Despite their strong motivation to learn harmony by ear, they still seemed to have been more confident in learning classical harmony from score. While students had more experience learning jazz in informal settings that focused on aural learning, they naturally felt more motivated to learn jazz harmony by listening to recorded tunes or tunes that were sung during the lessons. However, because only a few students learnt jazz formally in mixed ways, where sometimes score learning was overemphasized, it seemed that some of them were confident learning the theoretical elements of jazz from the score. This point was highlighted by the similar rates of favourable mention for both the score-learning and listening approaches to learning jazz theory.

Nevertheless, I intended to compare students' opinions to my lesson observations in more detail to find relationships between preferred approaches and students' progress in becoming skilled at practical skills.

4.5.6 The relationship between various teaching approaches and development of musical skills

A mixture of theoretical knowledge and musical skills is required for learning harmony. While the tasks can be challenging for students, the performance depends also on an individual's previous experiences and musical skills, and not simply on the teaching material of the genre.

In order to provide a comprehensive understanding of the approaches most applicable to teaching harmony, it was necessary to combine information about students' background with their opinions on the various approaches and the teacher's observations of their learning. The preference for certain sub-approaches was also influenced by what kind of tasks the students found challenging. For learning jazz, four students found improvisation to be a new and, therefore, challenging task. In both genres, three students had trouble with score reading, whereas other students found score analysis problematic in music theory. However, most students did not comment on any challenges in those tasks which required high level of aural skills, as opposed to my own observation of these task being the most challenging exercises for the students. My

notes from the teacher diaries and the video observations provide an essential source of data for this point.

1) Aural recognition

The tasks of singing different chords, chord progressions or bass notes as well as identifying the different musical terms by listening (either by singing back or inner hearing) remained problematic from the second lesson onwards; however, the students' proficiency in these tasks improved to a great extent by the end of the course. Most students confidently ranked aural tasks, such as listening, as the least challenging task, but I noticed recurring problems with aural recognition, which seemed to stem mostly from a lack of proper solfège or ear-training. This discrepancy between the students and teacher's perspectives might have been the result of the fact that aural tasks had been one of the suggested approaches by most students, and their enthusiasm and motivation influenced their own perception of how challenging the activity was.

"There were still challenges in singing the voices for different inversions of Circle of Fifths chord progressions, when split into 4 voices. Intonation of the middle part was usually the most inaccurate".

"Singing out the bass notes from Roman numerals was sometimes problematic, as it needs a sort of relative hearing, similar to Relative solfa. But as most students don't know Relative solfa, the relative hearing must be trained more in future using Roman numerals" (extract from teacher diary 5).

"The performance at the task of determining more complex jazz chords by listening to them played one at a time on the piano generally improved for everyone. Identifying the colour notes still proved difficult for most of them though, especially when I played the chords in inversion; however, most students were very confident and correct in identifying all of these chords and chord progressions on the written score. The same problem occurred when I was playing the piano and they were singing the different II-V-I types, in major and minor, and with different colour notes and voicing." (Extract from video 3, and teacher diary 6).

Students who had previously learnt harmony using mostly an analytical approach had more difficulties with aural tasks, for instance, identifying different musical terms through listening. Anna stated: *"just listening to them [the music examples in the aural tasks] without knowing which tone is played is hard, [...] I used to analyse from notes and visual data, rather than just aurally".*

In addition, the particular way a student might habitually remember or learn things could have been another reason for not achieving well in these tasks. For instance, Helena mentioned that she was a *"visual learner"*.

2) Score reading

From the second lesson onwards, singing or playing the piano from a score also seemed to be challenging for many students, but their proficiency in doing so improved significantly by the end of the course.

“Although a two-chord progression of 4 and 5 voices in close position could be sung from score without too many problems, those that did exist, lay in the intonation and proper reading of the middle voices. We could not do this using Relative solfa, because a good half of the students were not familiar with it at all, even though that tool could have helped - especially in the case of middle voices.” (Extract from teacher diary 2).

The difficulty in singing or playing from scores was sometimes explained by students as being simply a technical problem, i.e. being out of practice because they had not played the piano for many years. However, in many cases, these problems might well have originated because of a less experience of ear-training. Indeed, Anna felt that *“without the help of piano, just reading it is a little hard”*.

Another reason might have been the fact that they did not have the confidence to connect their inner hearing to the visual image. Jasmin, for example, explained *“naming the notes by singing [...] was challenging [...]. When you sing you really have to hear the notes”*.

Meanwhile, Simone had complex problems with reading from the score: *“singing a tune while playing the piano...”*; this problem could well have stemmed from a lack of sufficient training in formal solfège, inner hearing, reading the score in general, and the relatively less years spent learning the piano. She explained:

“I seldom had a piano in front of me [...] I learnt to read notes as 7-year-old, but I’ve never been fluent at it, always singing and playing everything from hearing”. Furthermore, learning to read scores *“by having a keyboard in front of you”* had previously been a negative experience for her: *“more patience and explanation in practice”* was what she really needed from her teacher.

3) Score analysis

The course included many theoretical issues that were new to most of the students. The difficulties with score analysis of both baroque and jazz examples also became apparent in Lessons 2-4 in spite of the students’ extensive experiences in learning harmony through this approach during their previous music education. The challenges appeared to have stemmed from the limited ability in reading the score, lack of appropriate knowledge in both classical and jazz theory, and lack of inner hearing (i.e. *“hearing the score”*).

For Katie, who had majored in jazz/pop singing, *“the classical parts were the hardest because [she had] forgotten almost everything and also [she had] not studied classical theory very much.”*

Negative experiences in learning classical harmony were also cited as a reason behind this finding. Simone felt that *“my experience and the experience of my friends [sic] in classical harmony teaching is often centred on memorising the possible mistakes and forbidden notes”*.

4) Putting knowledge into practice: Playing (and singing) on the piano

Piano-playing tasks aimed to develop a better understanding of the aspect of music theory. These tasks consisted of playing baroque variations, jazz tunes,

bass lines, or chord progressions, with or without singing. The various tasks used both piano and aural skills to develop a better understanding of the aspect of music theory being addressed. However, the tasks were adjusted to the students' individual level of piano playing, as a few students emphasized their technical weaknesses and lack of experience in playing the piano and hand-coordination problems as major issues.

Simone was one such student who felt she *"was not able to play all the notes of Passacaglia or Autumn Leaves, even after practising many times. It [had] been many years since [she'd] read from the notes with the piano."* She also found *"singing a tune while playing the piano"* difficult.

Anna found playing the bass variations and walking bass line with her left hand problematic *"because the problem of the left hand as well, is that it's not as skilful as the right hand. ...it is a little hard to synchronise it with the right hand"*.

5) Playing along with the recording and score

Another new and complex task was to play-along with recorded music, something we tried out in Lessons 4 and 5. This pedagogical tool is well known in jazz pedagogy and requires a combination of skills, such as reading, inner hearing, and technical proficiency of the musical instrument. The main aim of playing along with a recording is to increase stylistic expression, good phasing, and tempo feel, and to better hear the relationship between improvised realisations and the harmonic foundations they are performed over. Two students challenged themselves with this brand new task, playing either the bass notes or theme to a recording of the tune Take the 'A' Train. Although Ed had more experience of playing in bands, he still had difficulties following the structure in the lead-sheet. Meanwhile, Anna had never tried *"playing with recorded music"* and she found it difficult *"to keep up with that"*. In other words, it was difficult for her not only to keep up with the tempo but also to change the harmonic flow of the form.

6) Improvisation on the piano

The students' ranked improvisation as the most challenging task but, at the same time, found it to be the most pleasurable activity in the course, probably because of the novelty of learning harmony in this way.

Simone, for example, who had generally the most problem playing the piano, stated that improvisation was the most enjoyable activity: *"I [...] enjoyed improvising with a few chords"*. She needed some encouragement to improvise in pairs, as she had taught herself to play piano, but her eagerness to learn the improvisation technique is highlighted by her statement: *"it suited my project of learning to play the piano excellently"*.

Besides the technical barriers, students were relatively inexperienced in improvising and they had to pay more attention to both the stylistic and aesthetic features while improvising. Therefore, I attempted to evaluate students'

initial improvisations as objectively as possible. The assessment of improvisation is often considered to be the most complicated task even for the most experienced improviser and accomplished musician, since there are numerous criteria, for instance, aesthetic or stylistic, which could be taken into account in the evaluation. The students judged their own performance against what they thought sounded good or bad, so their opinions tended to be subjective. Moreover, students did not have the opportunity to watch their video about their improvisations, which was later judged by me (the researcher) as one issue that could be improved in the next research cycle, so the students had to rely on their memories about their performances. Nevertheless, contrary to students' self-appraisal and their own opinions as to which activities were the most challenging, I ranked improvisation as the least challenging activity.

Students also highlighted the problems of addressing theoretical issues in real-time activities, i.e. applying the theory in practice with confidence. This was especially apparent in jazz; therefore, students' reaction was natural as they were mostly unfamiliar with improvising in this context.

For instance, Anna acknowledged: *"for me, the first step (in terms of understanding and getting the sound) is harmony. So, for me it is easier when I know the harmony first to be able to improvise"*.

Katie, the only student with a background in jazz/pop singing, had a similar opinion to Anna's, noting that *"improvisation is helpful when you know the rules of jazz. You can learn by improvisation, but then you have to be on an upper level on learning for jazz harmony and theory"*.

Nevertheless, during my observations, I kept in mind that improvisation is a holistic phenomenon, which embraces the joy of creation and the "mistakes" in this context are rather necessary imperfections that initiate a process of learning. Therefore, my observations in teacher diary 1 about the first a cappella singing and group piano improvisation at the very beginning of the course (see chapter 4.5.1) suggest that improvising without stylistic barriers could be a good starting point for learning stylistic improvisation. This observation guided the plan of my next research cycle (Study Two), in which my original idea was to investigate the differences between learning baroque and jazz harmony with and without improvisation in two parallel groups (Chapter 5.3.2).

"The improvisation went pretty well. Students seem to enjoy it. They copied my themes quickly (e.g. a groove in G-D'-F'-D')⁴¹, daring to sing variations together and also improvising one by one. They sang in tune and listened to each other".

"Piano improvisation pairs (3 or 4 hands): I let them make up their own chord progressions on a theme of only 2 chords. Result: C major and G minor triads. I started to play these 2 chords on the piano in a groovy rhythm. Three students then dared to improvise the upper melody with one or with two hands and they seemed to enjoy it very much".

From Lesson 4 onwards, I observed sufficient development in jazz improvisation, especially when more difficult chord progressions (with extensions) were used. The improvement in student's musical expression and creativity

⁴¹ Grove Dictionary of Music

was apparent by the end of the course. Nevertheless, in order to be greatly skilled in improvisation in any style, I assumed that sufficient knowledge of theory is required. This could be observed on the fifth lesson, when we explored various modal scales on G(m)-F(7), with various additional notes and extensions (Appendix C: teaching material chord variants of i-v6). Ed and Helena attempted to improvise on the chosen chord progression on my accompaniment after they presented the chords and fitting scales.

“Ed was eager to explore the scales on Gsus9 - Fsus9 and improvise on my accompaniment. He could figure out the scales G Aeolian and F Mixolydian very well from the chords played on the piano; however, he had difficulty naming the scales. He was eager to improvise on my “rubato” accompaniment and played very fine melodies. He seemed to know Miles Davis’ So What well, since he borrowed some elements from the tune”.

“Helena seemed to know very well the scales and chords used in jazz. She demonstrated perfectly the sound of the different scales in relationship with the chords. We also improvised together on my accompaniment on the Gm9 – F13. She played excellent musicality and built up the melodies emphasizing the Phrygian sound.”

In the final questionnaire, the students were asked about the improvisation context they felt most comfortable with when improvising in both baroque and jazz styles either by *playing the piano or singing*. With regard to the genres and the ways of improvising, most students preferred improvising baroque music *alone*, whereas in jazz, they did this mostly in *pairs* or in a *group*. One remarkable exception was Helena, who mentioned that improvisation was generally the most challenging activity over the entire course. She had 20 years’ experience of playing the piano, yet she felt more comfortable improvising in both classical and jazz styles only at home and while playing alone. She also emphasized *“learning and playing by myself”* as the most enjoyable activity in her previous music education.

Nevertheless, teacher observations indicated that students generally appeared bolder, happier, and more creative when improvising together than when doing so alone. Teacher diary 5 and its accompanying video illustrates this with regard to the development of peer-group improvisation in jazz.

“Playing the chord progression using cycle of fifths in different voicings on the piano and improvising to the tune ‘Fly Me to the Moon’ went much better, especially when students played in pairs and even in trios. They shared the bass, chord progression, and melody between hands (either playing with one hand or together with both hands) and they played it much better when the melodies of both bass and upper hands were varied or improvised. Jasmin played the chord progression very well, and the accompaniment was more sophisticated and varied in terms of rhythm. Agatha tried to embellish the bass line that ended up in a boldly stylish jazz walking bass”.

The fact that students seemed to be more comfortable and enjoyed playing and improvising together led to questions about the possible benefits of peer-learning, investigated further in the next study (specified in Chapter 5.3.4 in detail).

On comparing the teacher and students’ observations, it was found that all the challenges faced while performing the tasks, at some point were related to

the students' limited aural skills. For instance, students had trouble recognising the known elements of music by listening to or "inner hearing" of the score. While theoretical knowledge has been proven to be important directly for the singing and playing, score analysis, and improvisation activities, the aural skills appeared to have been relevant to all the activities. Therefore, the success of certain approaches to learning harmony showed a close relationship with the students' existing musical background and musical skills.

4.6 Summary of results

On summarising the results of the harmony course, it can be concluded that students could generally develop their harmony knowledge in both styles and practical musical skills throughout such a short course, but their performance was influenced by their existing theoretical knowledge and musical skills. Students' individual backgrounds in music education also had an impact on their suggestions regarding the approaches to be used in the course and which approaches to learning harmony they found more beneficial.

The overall findings from both the students and the teacher's perspectives indicated that in both classical and jazz genres, the approaches that involved various practical and live musical activities and used real musical materials, for instance, singing and playing with the piano, improvising, and writing variation compositions, were considered highly beneficial. Composition and improvisation exercises, in particular, contributed to the understanding of the relationship between the two styles, so they appeared to have been successful as tools for learning baroque (classical) and jazz harmony combined. Variation-writing activities allowed students to be deeply involved in the process of learning the stylistic features of both baroque and jazz harmony because they had time to replay, re-fine, and re-think the composed variations and compare them to the original musical examples. Meanwhile, improvisation was found to be a beneficial activity in terms of putting theory into instant practice. It sharpened the students' aural skills, such as the inner hearing, as well as their musical memory, especially when students improvised in pairs. However, improvisation seemed to have been more applicable when basic theoretical knowledge and sufficient piano skills were first established.

The aural approaches to learning harmony in both styles appeared to have been successful, particularly in the case of jazz, since the students had less formal experiences in learning by ear and learning jazz harmony in general. Therefore, learning the various elements of music by listening to real musical examples or through singing and playing back the listened theoretical elements was not only beneficial but also a motivating exercise. Those approaches that focused on learning from the score were less favoured among the students, since most of them learnt harmony this way in their formal music education in both styles, while reading and analysing real musical examples from the baroque

repertoire were considered to be beneficial in learning baroque (classical) harmony.

In the following chapter, I discuss the findings in the extant literature and the conclusions of the pilot study that were the basis of the next research cycle.

4.7 Discussion of Study One

Teaching harmony at the tertiary level can be approached from many angles, for instance, by focusing on aural learning, score analysis, theoretical elements and concepts, or certain stylistic features of harmony from different eras. Various practical skills and musical styles can also be integrated in the teaching process. Classical and jazz harmony pedagogy traditionally follows separate paths that intend to develop their own approaches and methods based on the different origins, features, and idioms of each style. Therefore, the first concern arising when teaching classical (including baroque) and jazz harmony in combination was to understand the differences between the two styles. The research considered the traditional differences between the styles from both historical and educational perspectives and also looked at the way in which the textbooks organise the content and approaches to presenting harmony in classical and jazz genres. Therefore, the primary aim of the pilot study (Study One) was to identify certain distinguishing teaching approaches from each genre and examine the cross-applicability of those in the combined teaching of classical (including baroque) and jazz harmony. The study also looked at what kind of pedagogical approaches and tools could bridge the gap between the two genres, for instance composing and improvising, and how these approaches function in the combined teaching of classical and jazz harmony. Students' previous experiences in music education, motivation to learning harmony, preference of various teaching approaches, opinions about the challenges faced in various activities, and progress made in learning harmony in both styles were taken into account, and were compared with the teacher-researcher's observations and evaluations on the said matters.

The study, overall, found those pedagogical methods and approaches the most successful in the combined teaching of classical and jazz harmony that involved live, practical music activities in the learning process and principally used existing musical examples from both styles. Therefore, the practical approach seemed to be particularly successful with the stylistic strategy. In other words, students could understand the stylistic features of harmony in both styles better through "*real compositions [...] as opposed to artificial exercises*", in line with the philosophy of Comprehensive Musicianship approach described by Rogers (2004, p. 20). The main benefit of the various practical activities was that students created live musical sounds by singing and playing the piano or improvisation, and these practise seemed to have helped develop their aural skills.

Rogers (2004, pp. 27-28) describes the differences between *skills-learning* such as “*singing, aurally recognizing, transposing, harmonizing, performing, and composing, etc. music*” and *concept-learning* such as, “*reading, discussing, analysing and thinking about music*” in the mainstream classical music theory curricula, suggesting that achieving music theory knowledge is possible either with or without live musical activities. However, my students felt more motivated to learn harmony “*by doing*”, since these approaches were missing in the majority of their previous music education. These students had diverse musical knowledge, skills, experiences, goals, and motivations, with a few of them having grown up in different cultural circumstances. They generally had a stronger background in classical than in jazz music, and most of them had never learnt jazz piano or jazz theory formally, meanwhile, all of them were involved in learning jazz in various informal ways. The lack of a formal background in jazz naturally raised their curiosity and excitement combined with a certain level of uncertainty with regard to learning jazz theory. The extensive classical music education gave solid background knowledge to the students learning both classical and jazz harmony, but at the same time, their expectations were higher about learning something new and different from their previous experiences. Therefore, students suggested more practical (live) music activities, using more real musical material instead of focusing on “*paper work*” and the “... *particular rules*” of the contrived exercises. Therefore, despite the various challenges, they enjoyed learning with singing and playing the piano, improvisation, and written variation composition exercises.

Improvisations and variation compositions seemed to have been successful teaching tools for the course, in line with the Comprehensive Musicianship approach (Rogers, 2004, pp. 20, 21). These developed students’ creativity, stylistic knowledge, and understanding of harmony, and in Rogers’ words, helped them “*make a closer connection to real music*” (2004, p. 21). All of these benefits could be seen in students’ achievements in analysing the baroque Foglia at the post-harmony test. Besides improvisation and composition activities, playing chord progressions on the piano and singing the various voices positively influenced the knowledge of II-V-I voicing techniques as well. Improvisation was found to be a beneficial activity in terms of putting theory into instant practice that helped students develop their aural skills, including the inner hearing, and musical memory.

Improvisation could bridge the gap between the two genres and was found to be most effective in cases of students with basic theoretical knowledge and sufficient piano skills. Practitioner-researchers such as Chyu, who explored the teaching methods for multiple stylistic improvisations for classical pianists at elementary and intermediate levels (2004), and Woosley, who conducted a similar study for college teachers (2012), both agreed that a certain level knowledge of aural skills and music theory was a pre-requisite for successful improvisation. At the same time, both of them stress on the benefits of improvisation for developing various musical skills and a better understanding of music theory. In the current pilot study (Study One), most of the students also felt

confidence learning the theoretical elements first, such as the chords and the chord progressions by either listening or from written sources, thereby proving the relevance of the theoretical learning strategies, especially in jazz; this finding was in accordance with the content and approaches specified in most jazz theory books or online tutorials that present an overview of the music theory in order to provide hands-on tools for improvisation.

Similarly to improvisation, composition activities appeared to have been beneficial exercises in both styles because students could apply both their theoretical and stylistic knowledge in practice. However, compared to improvisation, variation-writing activities helped students the composition process as they had time to re-check their ideas by playing the piano, listening to a recording, or by analysing the stylistic traits of notated music. Therefore, variation-writing activities especially enhanced the applicability of the stylistic learning strategy in both styles. The majority of recent harmony books also approach the subject mainly through the existing musical excerpts; however, still many music theory books include contrived, artificial musical examples, to a certain extent, which Murrow (1995) classified as part of the “traditional” classical harmony instruction. Therefore, for those students who remarked that they learnt classical harmony exclusively without real musical material, i.e. “traditional” way according to Murrow, the variation-playing and writing exercises were especially favoured and beneficial during the course. Nevertheless, the overall success of jazz II-V-I chord progression voice-leading writing tasks in the post harmony test was the result of both certain practical exercises during the lessons and the students’ extensive previous classical theory studies, which created a solid foundation for the jazz chord progression voice-leading.

On the other hand, improvisation and variation composition as well as playing chord accompaniments or playing along with recorded music and score were new activities and, therefore, challenging for most students, especially in the case of jazz. The improvisation activities were challenging partly because they had limited piano and aural skills, lack of skills in improvisation, and little knowledge of jazz harmony. In addition, despite having more classical piano experiences students who tried out playing along with recorded music or the score seemed to have problems getting accustomed to jazz’s unique rhythmical and phrasing features in this short time of training. A few students seemed to have problems playing the chords in a certain way, such as using various inversions, because of the lack of technical proficiency and practice. These approaches, especially, the improvisation and the chord accompaniment both with and without the use of play-along recordings were, therefore, explored in the next research cycle.

Aural learning appeared to have been very beneficial in both styles, since most students had not had any experience learning music (including harmony) by ear in the formal music education context. Ear-learning of real musical examples was especially beneficial and motivating in jazz and something that students enjoyed very much, since they had learnt jazz harmony mainly in informal ways whereby the aural approaches were emphasized. In contrast, they

learnt classical harmony principally from scores and by analysis. These learning experiences generally reflect the differences between the traditional musical practices of both genres: the notated score is the source of classical music, and jazz musicians originally copied other musicians' ideas, i.e. learnt by ear (Monson, 2002). A recent study by Creech et al. (2008) showed that these practices are still distinct between today's classical and non-classical musicians in terms of necessary musical skills. The research pointed that professional classical musicians and tertiary performance students favour technical, notation-based, and analytical skills in contrast to popular, jazz, and folk musicians, and tertiary performance students, who prioritised memorisation and improvisation. However, there are areas in jazz education where the written score is as important as it is in the classical music education, such as in ensemble playing, learning transcribed solos, or using playing-along sources, such as J. Aebersold's Play-A-Long series (first published in 1979).

Nevertheless, students' relatively limited experiences in formal aural studies resulted in not only the aural learning but also other musical activities being challenging. It was observed during the lessons that most students did not know how to apply the heard information into the practice, such as to recognise the elements that they could recognise from the score or "hear the score" while playing the piano. The results of the harmony post-test also indicated that the identification of the cycle of fifths and II-V-I progressions by means of aural recognition were the least successfully completed tasks, in contrast to writing these with correct voicing and voice-leading, and regardless of experience in jazz, the students who had more experience learning by aural approaches managed to recognise the chord progressions better by ear. These results were in line with the major music education philosophies and concepts (among others, those of Kodály, Suzuki and Gordon) that have for a long time emphasized the importance of training in musical hearing before learning to play the instrument and learning the "sound before sign" (e.g. Feldman & Contzius, 2011) from the early childhood.

Karpinski (2000) claimed that the well-trained ear leads straight to the development of other skills, such as sight-reading or performing, and he organised the structure of his book on aural acquisition along these lines, as he found that aural skills benefited students' learning. Ilomäki (2011) also reported that the music academy students who had previously learnt music by ear and singing participated more easily in aural skills courses that involved piano use than those who had mainly experienced score-based learning. Brown (1990) also found that a semester of playing the piano by ear led to significant improvement in undergraduate college students' aural comprehension, such as melody and harmony recognition and transcription as well as on melodic and harmonic playing by ear skills.

It seems that the effect of aural instruction on various musical skills has been studied for many decades in higher music education, but not all of them showed unambiguous results. Humpreys' (1984) "harmonic skills program", i.e. an aural and performance-training programme, had a positive effect on the ac-

companying skills but not on the development of aural recognition of the heard harmonic progression, as evidenced when the piano accompaniment skills learnt exclusively by ear were tested. Bogard (1983) tested an integrated theory instruction in which ear-training, sight-singing, and piano skills were interrelated, and found that while the programme had a positive effect on functional piano skills, it did not show a significant effect on the development of other skills, in contrast to the traditional music theory instruction. Both Humpreys and Brown pointed out that general piano training relies on reading the written score and that students with high performance skills generally showed very poor aural recognition skills. Nevertheless, both of them suggested the inclusion of aural learning (playing by ear) in traditional piano and music theory training.

However, the duration of the course in the current pilot study seemed insufficient for deeply examining the improvement in adult students' aural skills by the inclusion of aural learning; it was also pointed out that the aural learning in this context should have been more emphasized during the lessons. Therefore, ear-learning was planned as a principal teaching approach to learning harmony in both genres for the teaching course in the next research cycle.

Score analysis was generally ranked lower in terms of applicability by the students, since most of them learnt harmony this way in their formal music education in both styles. Nevertheless, by the end of the course, most students found reading and analysing real musical examples from the baroque repertoire beneficial while learning classical harmony, implying that there was nothing wrong with this approach if the score presented real musical examples and was accompanied by practical music activities to "hear" the score and to "do" the music, as suggested by the Comprehensive Musicianship curricular model (Rogers, 2004, pp. 20-21). Students found learning classical harmony through the theoretical strategy least beneficial, both from the score and by ear. In contrast, learning theory through active listening, singing and playing back, and memorising chords and chord progressions worked well in jazz, and these approaches were connected to the students' general informal learning experience of jazz harmony, for instance listening to and copying other musicians playing. On summarising the findings of the combined classical and jazz harmony course, it can be seen that most students developed their knowledge of harmony in both styles through such short, intensive courses. However, the students' existing knowledge and musical skills affected their performances. The different musical backgrounds and the ways in which students learnt harmony in their previous music education also had an impact on which teaching approaches were more beneficial to them while learning harmony. Students' rankings of their preferences for the various learning methods at most cases accorded with the approaches that they enjoyed. Despite the differences between the genres in terms of the approaches that students preferred for learning harmony, improvisation and variation-writing activities functioned well in bridging the gap between the two styles in such combined teaching. These findings informed the next research cycle and teaching course.

4.8 Conclusions for planning the next study

When Rogers (1984; 2004) described separating the written and aural skills in music theory teaching as a particular curricular philosophy, he pointed out the danger of an unbalanced development between knowledge and aural comprehension. Instead, “the integrated approach mixes ear-training, analysis and composition within a single unified course each semester. The musical advantage of this blending of topics is intended to guard against a potential danger of producing ‘paper-and-pencil’ musicians...” (1984, p. 16). The findings of the most applicable teaching approaches of the pilot study indicated that however, the practical and aural learning was found to be the most applicable in teaching harmony in both classical and jazz styles, the ideal curriculum should follow a combination of practical, aural and score-learning approaches. In other words, I intended to plan the harmony course for the next study by keeping a relative balance between the various approaches. For instance, besides the tasks like listening and singing and playing back the learnt information, the lessons should also include score learning and analysis, since the listened information should be connected to the notated chord symbols, rhythm, or melody. Rogers also suggested, “Analysis must always be done in relation to sound, and listening (for improvement in the classroom) must always be done in relation to analysis” (2004, p. 18).

Nevertheless, as evidenced in the pilot study, the students benefited from the aural learning; therefore, even though I did not know anything about the background of the participating students of the Study Two, I planned various activities for the lessons, with emphasis placed on ear-learning. Score learning was planned for providing a kind of feedback of the learnt elements of music.

The findings of pilot study’s harmony pre-, and post-test functioned as data sources for planning the harmony tests for the next research cycle (Study Two). The harmony tests of the current pilot study included mostly writing and analysis tasks with only a minor part devoted to aural recognition. As this approach was proven to be successful, especially in the jazz genre, it seemed best to investigate this approach further in the second cycle. The harmony tests in Study Two, therefore, were planned such as to focus more on the aural tasks. Furthermore, to obtain detailed data about the development of harmony knowledge, the results needed to be comparable, so identical material was planned to be used in the harmony tests for the next research cycle.

The findings of the pilot study suggested that students enjoyed various improvisation tasks with and without stylistic barriers. However, it could also be observed that a certain degree of theoretical knowledge, especially in jazz, was needed for confident improvisation. Nevertheless, the successful completion of the first vocal group improvisation activities in terms of various elements of music such as intervals, scales, and grooves, with and without the use of piano, suggested that improvising without stylistic barriers could be an encouraging approach for the less experienced students as well as a useful start

for learning the stylistic improvisation. I also wanted to determine how improvisation contributed to learning harmony and learning progress with improvisation added to the training programme right from the beginning of the programme. Therefore, I planned the next data collection course for two parallel groups, in which the test group would learn baroque and jazz harmony with improvisation and the control, group without improvisation.

The findings of pilot study and the early practice of jazz also indicated that improvisation should mainly be approached by listening and copying the heard stylistic elements of music (Monson, 2002, p. 115). In jazz, the recorded music could provide numerous sources for this approach, whereas the lead sheet could provide only a guideline for the melody, chords, and rhythm, but not for the pulse and phrasing that is crucial for the swing. In contrast, classical improvisation pedagogy principally considers the written source as being the starting point for improvisation. For example, Chyu's study (2004) focuses on repertoire-based piano improvisation emphasizing the importance of reading and analysing notated examples of classical music through melodic variation and question-answer composition. However, according to the findings of the current pilot study, the themes of baroque variations could be learnt both from the score and recorded music, providing a motivating blended approach to learning baroque improvisation for those students who had never tried improvising in baroque style. Furthermore, as playing along with the recording and score was only examined in the jazz context, I planned these activities for supporting the learning of stylistic features of baroque as well as baroque improvisations. The question-answer exercises mostly included improvisation pedagogy, regardless of style, and encouraged the less-experienced students to improvise and learn the particular stylistic element of music.

Because most students in the pilot study had some informal experiences improvising in jazz or popular styles, for instance, playing in bands, they were more courageous and creative during the lessons when they improvised together. This finding was somewhat in line with the students' comments about the activities they preferred the most for learning improvisation in classical and jazz styles. Most of them therefore reported that they felt more comfortable improvising baroque music "alone", while in the case of jazz, they mostly preferred paired or group improvisation activities. Nevertheless, since most students were not accustomed to improvising in baroque/classical music, this result also alludes to the fact that improvisation has been generally neglected in the traditional teaching practices and classical music curricula since the last half of the century. In contrast, performance in the jazz idiom has always been more associated with improvising with other musicians and jazz education is built upon these activities. Playing and improvising together during the lessons seemed to be the tasks that all students enjoyed. Furthermore, it was observed from the video recordings that peer improvisation activities were beneficial for students' aural skills as they listened carefully to others' playing. These activities reflected peer-learning situations that helped balance out the students' inequalities in terms of proficiency in different skills. The success of peer improvi-

sation in the current course gave rise to questions regarding the benefits of both individual and peer improvisation activities on the development of harmony knowledge and aural skills. Therefore, I chose peer improvisations as central activities for the lessons in the next data collection course (Study Two).

5 STUDY TWO

5.1 Aim of Study Two

The aims of Study Two were to integrate the elements of musical practice shared by both genres and traditions and assess how applicable these are for developing the knowledge of harmony and relative musical skills. Based on the outcomes of the first research cycle, which emphasized the need for harmony studies to include more aural and practical training, the main aim of Study Two was to explore how improvisation can be used as a functional pedagogical tool for teaching baroque and jazz harmony combined, and how it may have a positive effect on the development of harmony knowledge and various musical skills such as accompaniment, aural, and improvisation skills. Study Two used only baroque music material combined with jazz, since improvisation is an intrinsic idiom in both genres. The study also explored which particular elements would contribute to making improvisation an effective tool for teaching baroque and jazz harmony combined. The elements that were investigated included, among others: students' existing musical skills, their previous formal music education, their informal musical backgrounds, their motivations for learning harmony, and various peer and individual improvisation techniques. The last aim of this study, which stemmed from this, was to examine how both individual and melody improvisation skills with peer accompaniment, in which the parts of music i.e. melody, chord accompaniment and bass were shared between the students developed in both genres, and how they related to students' pre-existing knowledge and skills, and how they furthered the development of various musical skills needed to improve the knowledge of harmony during the research period.

5.2 Research questions

- 1) How can piano improvisation be used as a functional pedagogical tool for a combined teaching of baroque and jazz harmony at the tertiary level?
- 2) What elements contribute to making piano improvisation a functional teaching method for a combined teaching of baroque and jazz harmony, such as students' motivations to learning harmony, students' existing knowledge of harmony and musical skills, students' development of harmony knowledge and various musical skills, and peer versus individual improvisation techniques applied in different parts of the course?

5.3 Data collection: Re-planning the teaching course

An optional teaching course at the Music Department of University of Jyväskylä was used to collect data for the second research cycle. The Baroque - Jazz Harmony course (MKAP012 Käytännön valmiudet⁴²) ran throughout the entire academic year for two parallel groups. Each group received a total of 3 teaching hours (four 45-minute sessions) per week, over 22 weeks, which meant a total of 132 teaching hours. The two groups were taught the same material from baroque and jazz literature and practical approaches using keyboard, with emphasis on aural learning. Students' improvisation skills were tested as an additional music activity on the piano, both alone and with peers in different part of the course, see Chapter 5.3.2 in more detail.

5.3.1 Participants

Originally, 11 students voluntarily signed-up for the course, but, unfortunately, 2 of them could not participate in the course for the entire academic year; hence, the data pertaining to them were disqualified at the data analysis stage. I will, therefore, discuss the cases of only the nine students who finished the course. Data for the analysis comes from only these students (of which six were female, three, male, seven, Finnish, and two, international students). All of them were Bachelor of Music students at the University of Jyväskylä, except for one student who had already started a master's degree in music. At the beginning of the course, the students were divided into two groups, with four in one and five in the other group. Throughout this study, the students are addressed using pseudonyms to maintain their anonymity.

⁴² In Finnish Practical Skills

5.3.2 Limitations and their effect on the final course plan and data analysis

After evaluating the first research cycle and interpreting the findings, I found many issues related to the data collection and analysis that needed to be addressed. For instance, since the harmony tests in the pilot study were not planned using identical materials, the comparison of test development was not possible. For Study Two, I planned the harmony tests not only with identical material but also for numerical comparison.

Every attempt was made to ensure that as large a number of students as possible would participate in the baroque and jazz harmony course so that there would be a solid statistical basis for making group comparisons. Unfortunately, only a few were able to actually fully participate in what was, after all, an optional course. Initially, it was planned that the test group would have improvisation as an additional activity throughout the whole course, while the control group would have none, with an equal number of students being randomly assigned to each group. This would have allowed for a clearer comparison of learning outcomes between the two groups. However, when I made it clear in the course advertisement that improvisation would be part of the course for only 50% of the enrolled students, many students withdrew their registration. This very practical issue of getting enough students to register for the course led me to offer improvisation to both groups of students, but in the new plan, the two groups took turns to be either the control or test group. This meant that the two groups were distinguished in terms of when they improvised. In the first half of the course, the test group was the Early Improvisation Group (in the following named as Early IG), while in the second half, it was the Late Improvisation Group (in the following named as Late IG), (see Table 1).

However, this recruitment issue made my research design and data analysis significantly more complicated. Furthermore, even with this study plan, the number of students registering remained relatively small. Therefore, the decision was made to completely change the analysis approach, and statistical comparison was replaced with qualitative content analysis. The analysis procedure is described in detail in Chapter 5.4.

TABLE 1 How groups took turns in terms of improvisation during the two parts of course.

Name of group	First half of the course (autumn semester)	Second half of the course (spring semester)
Early Improvisation Group (Early IG)	Improvisation	No improvisation
Late Improvisation Group (Late IG)	No improvisation	Improvisation

5.3.3 Data sources

Data were gathered from three sources: directly from the participants, from expert evaluators involved in the research, and from teacher observations and evaluations.

Each student produced written data in the three tests they took for both baroque and jazz harmony. These tests were conducted at the start, the middle, and end of the course (Pre, Post 1, and Post 2, respectively). Based on the results of Study One, all three harmony tests consisted of the same 21 tasks for the qualitative and numerical comparison. The test content was also refined with focus on the aural recognition of various stylistic and theoretical elements including chord and melody dictation (transcription)⁴³ in both baroque and jazz genres. Furthermore, a few analytical and writing tasks were included. A detailed discussion of the tasks in each test as well as of the evaluation is presented in section 5.4.1.

Students were asked to complete four questionnaires. These were Q1 at the beginning of the course, Q2 and Q3 during the course, and a final questionnaire, FQ, at the end. Furthermore, supplementary questions were also asked via email after the course. The questionnaires, including the supplement questions, were prepared to gather different kinds of data from different stages of the course. Q1 enquired about students' previous education and any previous experience of the different musical tasks that were in focus in the lessons. Q2 and Q3 asked the students how useful they found the various activities and approaches for their learning progress in both baroque and jazz harmony during the course. At the end of the course, FQ asked students for their overall conclusions on how their learning of harmony in both styles developed during the different phases of the course i.e. with and without improvisation, how improvisation might have helped them develop aural skills and improve their knowledge of harmony, and whether learning both genres together in one course worked for them. In addition, after the course, supplementary questions gathered data about the different musical genres usually played and listened to by students in their free time since their adolescence. Finally, data regarding the Finnish students' participation in free piano accompaniment course (*vapaa säestys*) at both basic and advance levels was obtained from the university database. A detailed discussion of the content of the questionnaires and the analysis, is presented in Sections 5.3.5 – 5.3.7.

A total of 56 audio recordings were made (each varying from 20 to 40 seconds in length) to monitor how improvisation skills developed in both groups (Early and Late IGs). Because the two groups took turns to improvise in each half of the course, they were at different levels when answering the improvisation tests, so each group had to perform different tasks. The Early IG's tasks focused on only individual improvisations and they were given a simple chord progression for improvising in both baroque and jazz genres, whereas the Late IG performed both individual and peer improvisation with the teacher on more

⁴³ In the harmony tests, I used the term transcription for dictation.

style-specific chord progressions for each genre. This meant the four students in the Early IG did only two improvisation tasks each in both the Pre and Post-tests, giving a total of 16 audio files, while those in the Late IG (five students) did 4 improvisation tasks each, in both the Pre and Post-tests, giving a total of 40 audio files. Figure 3 below shows the data collection time-line during the course. A detailed discussion of improvisation test tasks and the evaluation, is presented in Section 5.4.3.

Additional data were taken from three hours of video recording, which covered the various piano playing and improvisation activities throughout the course. This data source provided important background data on how improvisation skills were developing, and the challenges each student was facing in both individual and peer improvisation tasks. Parts of the video that particularly illustrate the way in which individual students were developing their skills have been transcribed to support the narratives of various results (Section 5.5).

Finally, the teacher provided another source of data in the form of 22 weekly lesson plans for each group with information about the tasks and music material to be used in the lessons during the course as well as self-reflective observations and evaluations of the teaching process (Sections 5.3.4 - 5.3.6).

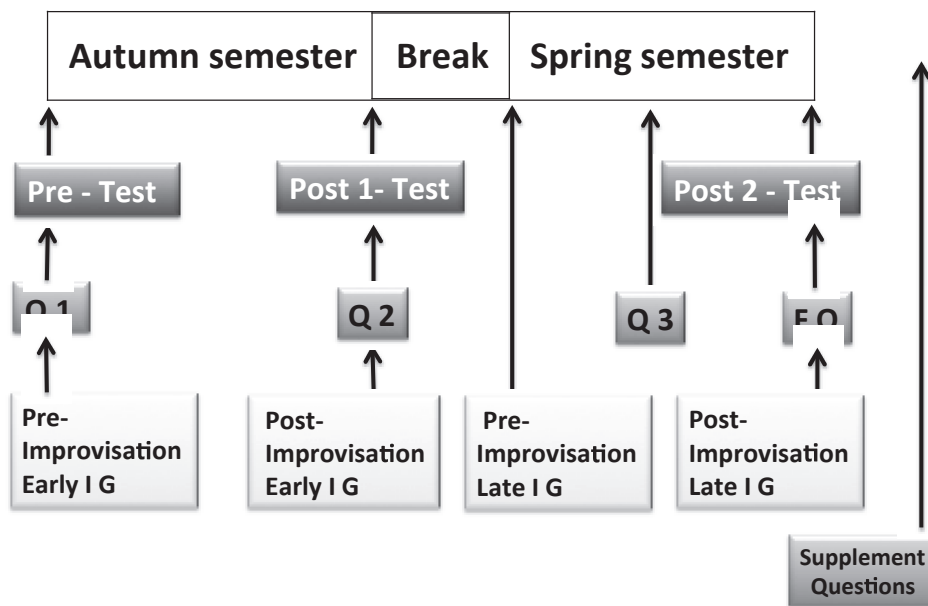


FIGURE 3 Time-line for when data were collected for the study. Pre-Test, Post 1-Test, Post 2-Test = Harmony tests; Q1, Q2, Q3, FQ (final questionnaire) and Supplement questions = Questionnaires; Pre-Improvisation and Post-Improvisation of Early IG = Improvisation tests of Early Improvisation Group; Pre-Improvisation and Post-Improvisation of Late IG = Improvisation tests of Late Improvisation Group.

5.3.4 Pedagogical approaches, tasks and course activities

The baroque and jazz harmony course spanned both semesters for both Early and Late IGs (11 weeks in the autumn and 11 weeks in the spring). One lesson was completed by each group per week, consisting of three 45 minutes sessions, which meant a total of 132 teaching sessions.

The two groups were taught with the same baroque and jazz material focusing on the aural and practical approach using keyboard, nevertheless fewer score analytical and theoretical writing approaches also were included. Furthermore, piano improvisation exercises especially with peers included in the lessons as an additional activity for both groups in the improvisation phases of course. The lesson plans attempted to cover the same material week by week for each parallel group, however, in reality there was sometimes a lag of up to two weeks between groups. There were a variety of reasons for this - for example students sometimes missed a lesson, or they possessed very different levels of knowledge and musical skill. The teaching material is also discussed in more detail in section 5.3.5.

Study One indicated the need to emphasize the practical and aural approaches to learning harmony in a combined teaching of baroque and jazz harmony. The teaching strategy therefore focused more on teaching through listening and aural-analysis, e.g., memorizing music by listening and transcribing music (both when played on the piano, or from a recording). All of the practical activities also relied heavily on aural skills such as recognizing music by listening and then singing / playing it back, or playing / singing along simultaneously with recordings, and improvising individually or with peers. These group improvisations usually involved the teacher at the start, accompanied by duos or trios at the piano. Participants each played one part of the music (e.g., melody, chord accompaniment, or bass) and would gradually swap these roles after a time, eventually allowing the teacher to completely withdraw from the improvisation. Students were never forced to improvise individually, instead this usually evolved out of individual chord progression realizations, accompaniment exercises with or without the recorded music.

Although material that had been recognized and learnt aurally was eventually checked against a score, this activity could also in itself either support inner hearing (when the score was read silently), or practical activities, for instance singing / playing or playing along with the recording (with the score providing additional support). Even the theoretical tasks like writing exercises (that also rely on inner hearing), were followed by any of the above practical activities. The course plan tried to balance these activities evenly between the parallel groups and between the baroque and jazz genres over the whole course, although improvisation activities took up a disproportionate amount of lesson time in each group's improvisation phase. To make up for this, more score analysis and score learning activities were added to the phases of course without improvisation for each group. In addition, because of the university's term dates, both groups had one week more for their improvisation phase of course, so I adjusted the course plan so the improvisation tests would take place in the

first week of each group's improvisation phase. It turned out that the activities which were most evenly spread across the course, especially when new material was first presented, were aural tasks and transcriptions.

5.3.5 Teaching material

The teaching material was based on that used in the first research cycle (Study One), and supplemented by other musical excerpts and extra theory. Because the previous course was so intensive and with fewer lessons, it used only a few examples of baroque and jazz music. It also meant these materials needed to be already somewhat familiar to participants, and to contain either cycle of fifth or II-V-I progressions. In comparison however, Study Two ran for a whole academic year, which meant there was time to explore the stylistic features of both styles more deeply, and this also influenced the choice of supplementary teaching material. Additional music examples from both genres were chosen to show the stylistic features of harmony in as many different ways as possible and to support piano improvisation.

Baroque variations by J. Pachelbel, G. F. Handel, C. Ph. E. Bach, H. Purcell, A. Corelli, A. Scarlatti, M. Marais, J. B. Lully and Ch. Fr. Witt were chosen, as well as a part of Handel's Messiah No. 6. Examples of the chaconne, passacaglia and foglia were chosen for having both even and uneven meter, and bass, melody embellishments and chord progressions characteristic of a particular form of baroque variation. Jazz standards such as Autumn Leaves, Fly Me to the Moon, Take the 'A' Train, Beautiful Love and All the Things You Are were particularly chosen to explore more fully the stylistic features of jazz chord progressions with extensions and colourations, the traits of rhythm and pulse in swing, and the characteristics of melody. The elements that baroque and jazz chord progressions have in common were compared, as were melody embellishments used for piano improvisation in each genre. One other point of comparison was between the bass variations in baroque excerpts and walking bass in jazz.

The following works from each genre are listed in the order that they sequentially appeared during the course:

Baroque core material for listening, reading, singing-playing, playing-along, transcribing, playing variations and improvising

(i) First part of the course:

- J. Pachelbel: Chaconne in F minor - 22 Variations for Organ
- G. F. Handel: Chaconne in G, Variations: IX, X, XI, XIV
- G. F. Handel: Passacaglia in G minor
- G. F. Handel: Messiah No. 6
- J. Pachelbel: Canon in D

For listening and dictation only (transcription):

- H. Purcell: Passacaglia Aria from Dido and Aeneas

(ii) Second part of the course:

- C. Ph. E. Bach: Variations on Spanish Foglia
- G. F. Handel: Sarabande in D minor
- G. F. Handel: Chaconne in D minor
- Ch. Fr. Witt: Passacaglia in D minor
- G. F. Handel: Gavotte and Variations

For listening only:

- J. B. Lully: Foglia
- M. Marais: Foglia

For listening and dictation only (transcription)

- A. Corelli: Foglia Variations
- A. Scarlatti: Foglia Variations

Jazz core material for listening, reading, singing-playing, playing-along, transcribing, playing variations and improvising

(i) First part of the course:

- Autumn Leaves
- Fly Me to the Moon

Solos for listening and transcribing from:

- Charlie Parker
- Miles Davis
- Stan Getz
- Diana Krall
- Bill Evans

(ii) Second part of the course:

- Take the 'A' Train
- Beautiful Love

For listening only:

- All the Things You Are

Solos for listening and transcribing from:

- Ella Fitzgerald
- Charlie Parker
- Bill Evans
- Michel Petrucciani

The sources of musical examples and the discography of audio and video recordings used for the listening, playing-along and transcription tasks could be found at the list of References.

5.3.6 Procedure for exploring the stylistic features of harmony

The baroque music excerpts were selected mostly according to their chord progressions so that a link could be made to basic jazz chord progressions, such as II-V-I.

The first excerpt of Pachelbel's Chaconne for organ, originally composed in F minor with the progression i-v6-iv6-V, was transposed to G minor for the students who might have found the original difficult to play and improvise on. The same chord progression was also used in Ch. Fr. Witt's Passacaglia in D minor, taught later on in the second half of the course, while the key of G minor was the same used in the Handel excerpts. Variations on IX-X-XI and XIV from the Chaconne in G also provided the framework for cycle of fifth chord progressions, as the theme and all variations of Handel's Passacaglia in G minor were originally composed in this key and also written as a cycle of fifth progression. One reason for focusing on cycle of fifth chord progressions in a minor key (iv-VII-III-VI-ii-V-I) was that it could also be found in many jazz standards like Autumn Leaves, Fly Me to the Moon, and partly in All the Things You Are. Another reason was that the cycle of fifth actually consists of two II-V-I chord progressions - the first in minor and the second in major that are the core elements of jazz harmony. Figure 4 shows how these chord progressions connect in such relevant examples.

Gm: IVm7	VII7	IIIImaj7	VIImaj7	II ^ø	V7	Im7
B [♭] : IIm7	V7	IImaj7	(IVmaj7)			
			Gm: II ^ø	V7	Im7	

FIGURE 4 Connections between the cycle of fifth and II-V-I chord progressions in both major and minor.

To probe further into the features of II-V-I jazz chord progressions in major and minor keys, two jazz standards were used in particular - Take the 'A' Train (major) and Beautiful Love (minor). Meanwhile similar and different elements of chord progressions in baroque, in both major and minor, were explored using the Spanish Foglia theme by composers such as C. Ph. E. Bach, A. Corelli and A. Scarlatti. These chord progressions then served as a basis for improvisation tasks in the improvisation tests (see in more detail in Chapter 5.4.3). For further exploration of other stylistic features in baroque variations, supplementary material was provided by Handel's Sarabande in D minor, and Chaconne in D minor.

5.3.7 Other theoretical issues

Understanding figured bass is not only important for reading score from the Baroque era, but it also underpins the structure of all chord inversions (triads and seventh chords). And because this course was longer, figured bass featured much more heavily than in Study One. Another benefit of learning this feature, is that it also familiarised students with the Roman numeral system, which would stand them in good stead in other contexts, as it is important not only in classical music analysis, but in jazz theory too. More tasks in this course were

therefore focused on reading and writing from figured bass. For the same reason, one short chord progression that used this feature (from the Pachelbel Chaconne in F minor - 22 Variations for Organ) was kept in each of the three harmony tests as a baroque writing task. Other pieces of music that were used to explore figured bass in different chord progressions were Pachelbel's Canon in D and Handel's G Major Gavotta con variazioni. All 22 lesson plans for each group, furthermore, those handouts of musical examples that were different from the music material of Study One could be found in Appendix G.

5.4 The procedure of data analysis

Qualitative content analysis (Atkinson & Delamont, 2010; Boeije, 2010; Mason, 2002) was applied to all the collected data, namely the 3 harmony tests, 56 audio recordings from the improvisation tests, 4 questionnaires and supplementary questions via email, and teacher observations and notes supported by the 3-hour long video recordings at the various lessons. However, the harmony tests, 3 of the 4 questionnaires, namely Q1, Q2, and Q3, and the audio recordings of improvisation tests also provided numerical data which were compared to each other to illustrate the results.

Identical material was used in all three harmony tests (Pre, Post 1, and Post 2). In this way, the 21 tasks in each test could be effectively compared to each other, providing both quantitative and qualitative data for measuring student development. Each task was analysed in terms of content and evaluated by assessment scores. The numerical data could then be used for individual comparison of students' achievements. The assessment scores of each task of harmony tests were transformed into percentages and grouped under different criteria, i.e. the genre or type of task, providing a broader picture of students' development of theoretical knowledge and written and aural skills in both genres.

Students answered the questions of the three questionnaires, evaluating how useful they found different tasks in the course, using a rating scale with scores ranging from 1 to 7 (with 7 being the highest). These numerical scores were transcribed to expressions, giving meanings to the figures. The responses to the questionnaires, as background data, supported students' detailed written answers about their learning progress given in FQ.

Likewise, the improvisation tests and three questionnaires were constructed in such a way that they could be analysed numerically. Experts used the same scale (1-7) to rate the anonymous audio files of student improvisations according to four assessment criteria. These numerical rates also were transcribed to expressions for supporting the description of results. Qualitative content analysis was also applied for evaluating the improvisation test tasks of the students. The analysis was conducted through a narrative description of the heard improvisation performances. The qualitative evaluation was compared to the experts' assessment rates given for each improvisation test task.

Furthermore, qualitative content analysis was used to evaluate the text transcribed from videos of the improvisation tasks performed in class, the observations students made about their learning in the FQ and supplementary questions, and the lesson plans relevant to these observations (Sections 5.4.1–5.4.6).

All data were considered to be important in the evaluation of each student's performance. Each student's performance was analysed separately, taking into account all data sources in order to form a chronological narrative of the development of the student's knowledge of harmony and improvisation during the course. This evaluation combined information from the educational background and the starting level of the student knowledge of harmony and various musical skills, the results of both harmony and improvisation tests, the observed theoretical and practical knowledge and skill development during the course, and the students' opinions about their motivations to learning harmony, about the various teaching methods, and materials employed at the course (see students' cases in Section 5.5). After the individual evaluation, the findings for all the students were combined and comparatively analysed in order to create an overall picture of the most relevant findings, (Section 5.6); this was done by another qualitative content analysis of the texts of each student's narratives, similar to the pilot study (Study One), through coding and categorising the common and different findings from each student's case. In the current study, however, Hyper Research software was not used for the text analysis, but, instead, the texts of the students' cases were coded manually.

In the first stage of coding, I highlighted those parts in the text of each student's cases that reflected the themes determined by the research questions. These were students' motivations, education background, starting knowledge of music theory in both styles, existing musical skills, development of harmony and improvisation, development of various other musical skills, the effect of teaching material, the effect of various musical activities and improvisation exercises. The coding procedure was continued until the recurring themes that emerged from the broader texts could be identified, for instance "accompaniment", "play-along", "influence of pairs", "collaboration", "stylistic features", "theory", "music material", etc. Conclusions were drawn from both common and different findings regarding the applicability of improvisation as a functional teaching tool in students' progress of learning harmony and development of various skills over the whole course.

5.4.1 The content and evaluation of harmony tests

The three harmony tests were the principal documents used for measuring students' development of knowledge of harmony in both genres and aural skills during the entire course both qualitatively in terms of the content and numerically using the given assessment scores. The Pre-harmony test assessed students' levels at the start of the course, post 1-test assessed students' development at the end of the first semester (i.e. halfway through the course), and post 2-test, at the end of the year. The tests focused on the aural recognition of both

theoretical and stylistic elements of harmony in both genres and covered analytical and writing tasks. All three tests consisted of the same 21 tasks, which ranged from basic (i.e. intervals) to the complex tasks (such as jazz theory and II-V-I voicing). The only materials which differed between the three tests were (a) the melody transcriptions in both baroque and jazz genres - in tasks 13 and 17, (b) the score analysis for the baroque variation - in task 15, and (c) the solutions suggested to students for listening - in tasks 12 and 16 (Bach and Charlie Parker, respectively). In spite of these slight changes in content, numerical comparison of scores was still possible, as the maximum achievable scores for the replaced materials remained the same. Nevertheless, a detailed explanation of the achievements of various tasks provided the basis of the comparison, described in the students' individual cases (Section 5.5).

The test took approximately one and a half hours, and the students found this test duration a little bit exhausting; however, test began with the least difficult tasks to help students warm up to the most difficult tasks towards the end. Nevertheless, after the first (Pre) harmony test, I thought that it would be unwise to change either the length or the content of the test because I wished to compare how students would be able to solve the various tasks in relation to the first (Pre) test.

The revised course was planned taking into account the results from Study One; therefore, the various aural and practical approaches were more focussed, and there were less theoretical tasks such as writing and analysis in the harmony tests. The ratio of aural/practical tasks to theory tasks in Study Two was 16:5, with the proportion of jazz tasks being higher than that of baroque aural tasks. Another revision resulting from Study One was that one of the baroque score analysis tasks now came from a real music excerpt to cover both stylistic and theoretical strategies for learning harmony. Both baroque and jazz harmony included two main categories of task.

(i) *Aural recognition tasks* included identifying musical elements played on the piano through listening, with the help of a musical score and list of terms to choose from, i.e. intervals, chords, or melodies in both styles. All three sections of the basic music theory began with this kind of listening task, as a warm-up exercise for the more difficult aural tasks ahead. One such advanced task was transcribing both chords and baroque variations and jazz melody patterns with no reference to the written score. Another advanced task was to identify chord progressions by chord markings through listening, but there was no need for students to note these down on the staff.

(ii) *Theoretical tasks* included the writing out of both chords and chord progressions from various chord markings such as lead sheet symbols, baroque-figured bass, and Roman numerals. Other theoretical tasks were score analysis, with and without a real music context.

Each task is individually described in the following text, in terms of subject matter, correct answers, and maximum attainable score. The Pre-harmony test and the Key for Pre-harmony test can be found in Appendix F.

Task No. 1: Identification of intervals

The first task required students to detect interval quantity. That is, to determine which sounded “larger” in five pairs of intervals played on the piano. They provided the answer by ticking a box next to either A or B. Each pair was only played once. The correct answers were: (i) B, major 7th (> minor 2nd); (ii) B, major 6th (> minor 3rd); (iii) A, minor 7th (> augmented 4th); (iv) A, minor 6th (> major 3rd); and (v) A, major 2nd (> minor 2nd). The maximum possible score in this task was five points (one per pair).

Task No. 2: Identification of intervals

The second task was to identify five intervals played only once each on the piano. These were already marked on the answer sheet, but students had to number them in the order in which they heard them. The correct order was (i) perfect 5th, (ii) major 7th, (iii) augmented 4th, (iv) major 2nd, and (v) minor 6th. The maximum possible score in this task was also five points (one per solution).

Task No. 3: Interval transcriptions

The third task was to listen to four intervals, and transcribe them onto the score, where the lower note for each interval was already written. Each of the four intervals was played twice on the piano: the first time with both notes played simultaneously; the second time, the lower note first followed by the higher. As students did not need to name the intervals they heard, enharmonic equivalents were also accepted. The maximum possible score in this task was four points (one per interval transcribed). The score of Figure 5 below shows the correct answers.



FIGURE 5 Correct answers for transcription in task no. 3

The same pattern as used in tasks 1-3 above (identification through multiple choice followed by a transcription exercise) was also used for tasks 4 - 11, concerning first triads and then seventh chords.

Task No. 4: Identification of triads

The fourth task asked students to determine which of four triads (played only once on the piano) sounded major, and which sounded minor. These covered all the positions of both major and minor triads (i.e., root, first inversion and second inversion), but these positions did not have to be named as part of the exercise. The correct answers, with the inversions in italics, were: (i) minor - 6;

(ii) major - root; (iii) minor - $6/4$; (iv) minor - root. The maximum possible score in this task was four points, one per correct answer.

Task No. 5: Identification of triads

This task required students to determine which of four triads (played only once on the piano) was augmented, and which diminished. These covered all the positions of both triads, but these positions did not have to be named as part of the identification exercise. The correct answers were as follows, with the inversions for diminished triads marked in italics: (i) augmented; (ii) diminished - root; (iii) diminished - $6/4$; (iv) augmented. The maximum possible score in this task was four points, one per correct answer.

Task No. 6: Identification of triads

The sixth task was to identify the inversion of four different triads played on the piano. Each triad was played three times (twice normally, and once with each note of the triad played separately, upwards from the lowest note). All positions were included, but the answers were multiple choice. The correct answers were as follows, with the quality of triads in italics: (i) $6/4$, i.e., second inversion - major; (ii) 6, i.e., first inversion - minor; (iii) $6/4$, i.e., second inversion - diminished; and (iv) 6, i.e., first inversion - minor. The maximum possible score in this task was four points, one per correct answer.

Task No. 7: Transcription of triads

The seventh task was to listen to four triads, and transcribe them onto the score, where the lowest note for each triad was already written. These bass notes could be either the root, the third or fifth in each triad, so chords could be played in all the positions. Each of the four triads was played on the piano three times (twice normally, and once with each note of the triad played separately from the lowest up). As students did not need to name the triads they heard, enharmonic equivalents were also accepted. The score of Figure 6 below shows the correct positioning for the two missing notes in each of the four triads. The maximum possible score in this task was half a point for each correctly positioned note, so four points.



FIGURE 6 Correct answers for triad transcription in task no. 7

Task No. 8: Identification of seventh chords

The eighth task was to identify four seventh chords from their root position (major or minor varieties only). The chords were each played on the piano three times (twice normally, and once with each note of the chord played separately and upwards from the root). These chords were already marked on the answer sheet, but students had to number them in the order in which they heard them. The correct order was (i) dominant 7th, (ii) minor-major 7th, (iii) major 7th, and (iv) minor 7th. The maximum possible score in this task was four points, one per correct answer.

Task No.9: Identification of seventh chords

The ninth task was to identify augmented and diminished seventh chords in their root positions. There were five chords in total, and they were each played on the piano three times (twice normally, and once with each note of the chord played separately and upwards from the root). Again, the chords were already marked on the answer sheet, but students had to number them in the order in which they heard them. The correct order was (i) half-diminished 7th, (ii) diminished-major 7th, (iii) augmented 7th, (iv) "full" diminished 7th, and (v) augmented-major 7th. The maximum possible score in this task was five points, one per correct answer.

Task No. 10: Identification of seventh chords

The tenth task was to identify the inversions of seventh chords played on the piano. There were four chords in total, and each one was played four times - twice normally, and twice with the notes played separately upwards from the lowest. All positions were included, but students only had to pick out the inversions on the multiple choice answer sheet. The correct answers were as follows, with the quality of the seventh chords marked in italics: (i) 6/5, i.e., the first inversion - dominant 7th; (ii) 4/3, i.e., second inversion - major 7th; (iii) 2, i.e., third inversion - minor 7th; and (iv) 6/5, i.e., first inversion - minor-major 7th. The maximum possible score in this task was four points, one per correct answer.

Task No. 11: Transcription of seventh chords

The eleventh task was to listen to a series of seventh chords, and transcribe them onto a score. There were four chords in total, with the lowest note of each already on the score. These bass notes could be either the root, third, fifth, or seventh in each, so the chords could be played in all positions. Each chord was played on the piano four times (twice normally, and twice with each note played separately from the lowest up). As students did not need to name the chords they heard, enharmonic equivalents were also accepted, see Figure 7 below. The maximum possible score in this task was eight points, two per correct seventh chord answered.



FIGURE 7 Correct answers for the transcription of 7th chords in task no. 11

Task No. 12: Listening to Bach's chorale excerpt

The twelfth task required students to determine whether the two voices they could hear were either soprano, alto, tenor or bass, when played a two bar excerpt on the piano from J. S. Bach's chorale. However, in each of the three harmony tests the voices played were changed, just in case a student remembered the answers from the last harmony test and skew the results. The correct answers for each harmony test were (i) soprano and tenor (Pre); (ii) alto and bass (Post 1), and (iii) soprano and bass (Post 2). In each test the maximum possible score was two points, one per correctly named voice.

Task No. 13: Baroque variation transcriptions

The thirteenth task was to listen and transcribe three half-period reductions (i.e., each four bars in length) from Pachelbel's Chaconne in F Minor - 22 Variations for Organ. Excerpts had been taken from the theme and two variations for two parts were transposed to G minor. Each of the transcriptions was written on a piano staff of four bars where the treble and bass clefs, key signature, time signature in 3/4, and starting notes in both keys were already marked. The reductions were rendered in such a way that their difficulty gradually increased from first to third excerpt. In addition, because the original opus was core material for the baroque part of the course, the excerpts were pedagogically chosen to be slightly different in each harmony test in case a student remembered the passage from last time and skewed the results. The only exception was the third excerpt that only varied in the post 2 harmony test, because it appeared to have been already the difficult enough for the students. Each excerpt could be played a maximum of five times.

Across the three harmony tests the number of notes in each excerpt of the task remained the same. This meant each student's task could be marked note-for-note and effectively compared. Nevertheless, the researcher also had to use her extensive teaching experience to grade accordingly when the student had, for instance, not misplaced individual notes, but instead misplaced the whole (correct) pattern. In such a case, not all the notes were marked as wrong, as the pattern was nevertheless right. The maximum possible score in each excerpt was 10 for the first (Variation 1), 16 for the second (Variation 2), and 26 for the third (Variation 3).

Task No. 14: Writing baroque chord progressions in four voices

The fourteenth task was to work out the chord progression transcribed in the previous task (13), and to write it in four voices using figured bass. The key signature, bass notes, and time signature in 3/4 were already indicated on the staff provided for this task on the answer sheet, but the starting position could be chosen freely (the third, fifth or octave of the chord could be in the soprano). In this task it was necessary for students to pay close attention to baroque-classical voice leading and doubling and to mark the chords under the score in Roman numerals. The maximum possible score for each chord was three (one per correct note) therefore the total for the whole chord progression was 12 points. Three possible solutions with both regular and irregular voice-leading are included in the key (see Appendix F) and below in Figure 8, and all kinds of voice leading and voice doubling possibilities (both regular and irregular) were discussed with students in the lessons.

Possible solution of voice leading No. 1.

Possible solution of voice leading No. 2.

Possible solution of voice leading No. 3.

FIGURE 8 Three possible solutions (with both regular and irregular voice-leading) for chord progressions in task no. 14

*Task No. 15: Analysis of baroque chord progressions
Differences in the task between the three harmony tests*

The three harmony tests actually had different baroque excerpts for analysis. This was because the excerpt used in the pre-test, from J. Pachelbel's Canon in D was also used in the first part of the course as well as the theme from C. Ph. E. Bach's Variations on Spanish Foglia was the core baroque material for the second part of the course. These examples were replaced in the subsequent harmony tests in order to challenge students with an unknown material. Notwithstanding a transformed excerpt from Handel's Passacaglia in G (that also featured in the first part of the course) was used in Post 2, because it was based on cycle of fifth chord progressions, which effectively concluded music theory issues in both genres. The different excerpts used for this task in each harmony test are shown in the next three Figures (9-11).

15. Analyse the following baroque variation with Roman numerals and lead sheet symbols: (There is an irregular parallel motion on the bar 4)

Canon in D

J. Pachelbel

D:	I	V	VI	III	IV	I	IV	V ⁷	I
	D	A	Bm	F#m	G	D	G	A7	D

FIGURE 9 Solution for the excerpt used in the first harmony test (Pre)

15. Analyse the following baroque variation with Roman numerals and lead sheet symbols:

12 Variations on the Spanish Foglia

C. Ph. E. Bach

d:	I	V ^{#(3)}	I	VII	III	VII	I	V ^{#(3)}
			(F: VI	V	I	V	VI)	
	Dm	A	Dm	C	F	C	Dm	A

FIGURE 10 Solution for the excerpt used in the second harmony test (Post 1)

15. Analyse the following baroque variation with Roman numerals and lead sheet symbols:

Passacaglia from Suite no. 7 - simplified theme

G. F. Händel

g minor:	I	IV	VII	III	VI	II	V#	I
or:	i	iv	VII	III	VI	ii ^o	V	i
	Gm	Cm	F	B ^b	E ^b	A ^o	D	Gm

FIGURE 11 Solution for the excerpt used in the third harmony test (Post 2)

Students had to analyse both the chords and the complex chord progression. Lead sheet symbols were used for the chord analysis, but as it only offers the possibility of naming chords individually, Roman numeral analysis was used for the chord progression as it describes better the relationship between chords. The maximum possible score in this task was 8 points (one per correctly named chord, except for the first and last tonic chords which scored half a point each).

Task No. 16: Listening to a jazz melody by Charlie Parker

The sixteenth task was to listen and choose between three melody patterns played only once on the piano, that were each four bars in length. The melody on which they were based was transcribed from Charlie Parker's solo in Confirmation, bars 52-55 (Charlie Parker Omnibook). The three patterns varied only in the way the last quarter note at the end of the first bar acted as an upbeat for the forthcoming melody of the second bar. The first pattern was from the original solo by Parker, with three sixteenth notes as the upbeat; the second reduced it to a single eighth note; while the third replaced it with a triplet motif. In the pre-test the solution was no. 2, while in both the Post 1 and Post 2, the solution was no. 3. Choosing the correct melody of the three was worth two points.

Task No. 17: Jazz melody transcriptions

The seventeenth task was to listen and transcribe two one-voice patterns based on II-V-I chord progression in C Major, with a 4/4 meter. The first melody was the shorter pattern (two bars), containing a typical improvised jazz motif based on a Tommy Flanagan's pattern (Gonda, 1997, p. 36) played six times, whereas the second pattern (four bars) was transcribed straight from one of the Charlie Parker solos (Charlie Parker Omnibook) and was played eight times.

Each of the transcriptions was written on a staff where the treble clef, number of bars, time signature, and starting notes were already noted. As in

task 13, there was a degree of difference between the two melodies played in each harmony test, but as with the baroque transcription, the number of notes in each pattern remained the same, to provide a fair basis for comparison. Again, the researcher had to grade accordingly when the student had, for instance, not misplaced individual notes, but instead misplaced the whole (correct) pattern. In such a case, not all the notes were marked as wrong, as the pattern was nevertheless right. The maximum possible score in this task was 10 points for the first pattern, and 25 for the second.

Task No. 18: Analysis of jazz chords

The eighteenth task was to identify 7 jazz chords from the written score using lead sheet symbols. The chords consisted of mostly basic 7th chords, some of which had colourations or extensions. The maximum number of points that could be scored in this test was 14 (two per correctly named chord). During the evaluation, the whole gamut of chord markings used in music theory was allowed, see Figure 12⁴⁴.

EmMaj7 D[∅] (Dm7b5) Gm6 Csus7 G7b5 B^bMaj9 D7add#11

FIGURE 12 Correct answers for analysing jazz chords in task no. 18

Task No. 19: Writing jazz chords

The nineteenth task was to write five jazz chords from lead sheet symbols on two levels, i.e., basic chords (triads or sevenths), and chords with extensions or colourations. The maximum number of points that could be scored in this task was 20 (two per correctly named chord). Half scores were also awarded if the mistakes were minor, such as missing alteration symbols, see Figure 13.

Gm7 C7 F6 B^bMaj7 Em7b5

Gm9 C13 F69 B^bMaj9 EsusØ

FIGURE 13 Correct answers for the jazz chords in task no. 19

⁴⁴ Some of the chords markings of Figures 12-14 differ from the original scores of the three harmony tests (see Appendices) for pedagogical reasons. In the harmony tests (as well as in the teaching materials) the seventh and various other extensions or additional notes (separated with slash symbols) show the whole structure of chords. (For instance BbMaj7/9 indicate that the seventh is the part of the BbMaj9 chord.)

Task No. 20: Identification of jazz chord progressions

The twentieth task was to identify four chord progressions using both Roman numerals and lead sheet symbols, after hearing them played three times on the piano (twice normally, and once with each note played separately and upwards from the root). The first three chord progressions were II-V-I played with different qualities, keys, in sevenths, and with various extensions (e.g., 6th and 9th). The last chord progression in this task was a cycle of fifth played with 7th and 9th extensions. The chord progressions were played in five voices, so that the bass (namely in this case the root) was played by the left hand on the piano, and the four other voices by the right hand (using the correct voice leading features). It was suggested to the students that whether keys were major or minor should be indicated in the Roman numeral analysis, and that extensions, notes or colourations added should be indicated in the lead sheet symbols. The maximum number of points that could be scored in this task was 16 (one per correctly named chord). Half scores were also awarded if the mistakes were minor, such as the odd missing symbol.

Task No. 21: Writing jazz chord progressions

This task involved writing two jazz II-V-I chord progressions for piano in five voices, using Roman numerals with different forms and extensions (mostly ninths). The first one was in G major and the second in D minor. This task was adapted from the Post-test of Study One and redesigned so that students only had to continue four voices of the progression from the starting position of the II chord in the staff for the right hand. The bass notes at the start were missing, see Figure 14. Each correct voicing for the right hand scored a maximum of two points, and each bass note scored one, which gave a maximum possible score of 14. Half scores were also awarded if there were only minor mistakes with the right hand's voicing.

G:IIm9 V9 IMaj9 d:IIIm7^b5 V7^b9 Im9

FIGURE 14 Solution for task no. 21

The results of the three harmony tests were analysed both numerically, in terms of assessment scores given to each test, as well as qualitatively in terms of the meaning of the given scores. The qualitative examination of the correct and incorrect answers was crucial because each task consisted of various components of music, which had a different nature and role in a particular musical context.

For instance, incorrectly recognising the same chord in the same task in all three tests had a different interpretation from incorrectly recognising different chords in each harmony test. Nevertheless, the assessment scores also provided overall information about the achievement of various tasks.

The scores given for each of the 21 tasks were converted into percentages and the differences between the percentages of the three harmony tests were compared. A similar procedure was carried out with the total score (226 points) for each of the harmony tests as well as 9 grouped tasks. The grouping was based on genre (baroque versus jazz) and the type of skill (aural, i.e. aural recognition and transcription of various elements of music versus theory, i.e. chord analysis and writing) in order to examine certain skill levels. Because the maximum possible attainable score varied for most of the 21 tasks, a mean maximum score was first computed for each of the 9 grouped tasks, and the mean scores were converted into percentages in order to support the narrative interpretation of each student's results, comparing between students' performance and development of skills, by means of graphs. In addition, since the post 2 harmony test was the final examination in the course, assessment grades were given according to the University's assessment scale, i.e. *fail* = 0, *weak* = 1, *fair* = 2, *good* = 3, *very good* = 4, and *excellent* = 5.

The list below illustrates how the grouping topics relate to the individual tasks:

Division of tasks into Baroque versus Jazz genres:

1. Baroque tasks: nos. 1-3, 4-7, 12-15.
2. Jazz tasks: nos. 1-3, 8-11, 16-21

Division of tasks into Aural versus Theory tasks:

3. Aural tasks: nos. 1-13, 16-17, 20
- 3a. Aural recognition of chords and chord progressions:
Baroque chords aural tasks: nos. 1-7
- 3b. Jazz chords aural tasks: nos. 1-3, 8-11, 20
- 3c. Melody transcriptions:
Baroque variation transcriptions: 13
Jazz pattern transcriptions: 17

4. Theory tasks: nos. 14-15, 18-19, 21

- 4a. Chord analysis tasks: 15, 18:
Baroque chord progression analysis: 15
Jazz chords analysis: 18
- 4b. Chords and chord progressions writing tasks: 14, 19, 21:
Baroque chord progression writing: 14
Jazz writing tasks: nos. 19-21.

5.4.2 Observations of improvisation activities in the lessons

The three hours of video recording provided important qualitative background data about the various improvisation activities conducted during the course. Students can be seen playing piano and improvising both individually, in duos or trios with peers, or sometimes with the teacher. Such qualitative data helped explain how students had developed their improvisation technique in both styles, individually and with peers, and how they applied their theoretical knowledge into practice for instance in chord accompaniment with and without playing along recordings. The observations also pointed out the challenges the students faced in the new activities in class as well as in their homework.

Each group practised improvisation after completing the sequenced lesson part of the course. However, as the groups performed the activities alternately, each group had slightly different music to work with, and the piano playing and improvisation tasks also varied. There were many overlaps between the tasks and material used, and as the course progressed, the tasks were adjusted more and more to the individual levels of students.

Both groups similarly focused on stylistic improvisation based on real music material in the two parts of the course. However, for encouraging the less experienced students, at the beginning of the course, the Early IG also explored the non-stylistic improvisation with various theoretical elements of music and basic techniques such as question and answer exercises.

The different baroque chaconnes and passacaglias provided a means to get better acquainted with the inherent features of bass variations and chord progressions. Students learnt to play chord progressions using baroque-classical voice-leading techniques, but they were also encouraged to play “free-style” progressions with irregular voice-leading and doublings. Stylistic melody embellishments and variations on melody, bass, and chord progressions were improvised either alone or together in duos and trios, so the players took turns to move round and try each of the voices out.

The Early IG focused on a four-note descending scale in minor keys, featured in both Pachelbel and Handel’s chaconnes: G-F-Eflat-D (or l s f m in Relative solfa). The skeleton chord progression of the theme was: Gm-Dm/F-Cm/Eflat, D (or in Roman numerals i-v6-iv6-V, in G minor). Meanwhile, along with the material in Handel’s chaconne, the Late IG explored the chord progression in the theme of Ph. E. Bach’s *Variations on Spanish Foglia* in D minor: i-V-i-VII-III-VII-i-V, and practised both stylistic and free improvisations with Pachelbel’s *Canon in D*.

With regard to jazz, “comping”, i.e. accompaniment of jazz standard songs, seemed to be one of the fundamental techniques that needed to be mastered. Chord voicing, walking bass line, and swing time feel were practiced by playing along with the recording at each lesson, both individually and with peers. These tasks provided the opportunity for students to share voices (hands) when playing together, according to their abilities at either chord accompaniment or playing bass. Shared playing was also evident when they were improvising melody, rhythm, and different voicing.

To begin with, the Early IG practised the cycle of fifths chord progression and *Autumn Leaves* by playing-along to the recording and improvising the melody and bass (either individually or together). They also transposed these elements to different keys and practiced different voicing of the chords with various rhythms, but only the more accomplished students attempted improvising walking bass. In comparison, the Late IG was ready to explore different inversions, chord voicing, keys, positions, and colouration possibilities (such as 9, 13, 69) for both cycle of fifths and II-V-I chord progressions in *Take the 'A' Train*. Only the more accomplished students tried really improvising the song, but all of them were able to play their own variations and get more acquainted with the stylistic features of the jazz walking bass. The entire list of various improvisation activities and music material is presented in the Lesson Plans of both groups (Appendix G).

The video observations were used to explain how students expressed their ideas in the improvisation test tasks in both styles, how successfully they applied their theoretical knowledge, and the various stylistic elements in the improvisation tests that were explored during the lessons. The observations were also important sources of students' progresses in learning harmony correlated along with the harmony test results and the questionnaires in which they expressed their opinions about the usefulness of various exercises and approaches and evaluated their own progress in learning harmony. Parts of the video that demonstrated various challenges and development of individual students were transcribed (and presented in the relevant parts of the study).

5.4.3 The content and analysis of improvisation tests

The pre- and post-improvisation tests were designed to gauge how students applied their theoretical knowledge of baroque and jazz harmony in practice, i.e. elementary stylistic improvisation in jazz and baroque on the piano. The tests were conducted at the beginning and end of the improvisation test phase for each group i.e. the autumn semester for the Early IG and spring semester for the Late IG.

For both the pre- and post-improvisation tests, the Early IG had to individually improvise both a jazz and baroque style on the piano, using Dm/C chords. Simple material was used, as the students' improvisational skills were unknown when the course started, mainly because the course advertisement had specified that students could enrol themselves for the course regardless of their previous experience of baroque or jazz improvisation on the piano. This was also the reason why there was no rigid adherence to one particular formula for extemporising in terms of melody, chord accompaniment, or playing the bass with either hand.

The harmony pre-test results indicated that the students started with very different levels of theoretical knowledge in both styles and aural skills. However, by the time the post 1-test for harmony was taken, some of the students in the Late IG had improved so much in the last two tasks of the test (nos. 20 and 21) that more style-specific improvisation tests were planned for that group

(Section 4.4). These more style-specific tests used a Dm7-G7-CMaj7 (II-V-I) chord progression for the jazz and a Dm-A-Bflat-A (i-V-VI-V) chord progression for the baroque task. However, according to the learnt chord progressions from baroque chaconnes, the i-V-iv6-V chord progression would have been stylistically more accurate for the baroque improvisation test than the i-V-VI-V (despite the fact that both chord progressions have the same bass-line). Also, most students seemed to have grasped the stylistic features of baroque chord progressions with inverted chords quite well during the first part of course (see the descriptions of development of harmony knowledge, Students cases of Late IG in Chapters 5.5.5 – 5.5.9 in more detail), yet for the first test I wanted to help students improvising with ‘simpler’ chord progression consisting of only root position triads.

First, the student was tested in a peer situation, i.e. playing the melody with the teacher accompanying; then, they were tested individually, i.e. playing with both the hands independently. These changes to improvisation tests for the Late IG are covered in more detail in Section 5.5.2. This meant that, in the end, the improvisation tests were quite different for each group, making direct comparison difficult. The improvisation test phase for each group was therefore analysed separately, and the results were compared with other data relevant to the improvement in each student’s harmony and aural skills.

The students’ improvisations were first video recorded, and these recordings were used to create audio files. The video recordings helped the researcher identify students and the relevant audio in the data analysis. The anonymous audio files of the pre- and post-improvisation tests were sent to four evaluators per group in a randomised order. Each file was a maximum of one minute, but on average 25–40 seconds in length. The evaluators were experts in the field at the University of Jyväskylä, the Sibelius Academy, and the Department of Jazz Performance and Singing of the Kodolányi University of Applied Sciences. The evaluators’ main expertise was the piano pedagogy in both baroque and jazz, but one expert’s main area was also music theory, and one was involved in the musicology field, focusing on baroque and early music. The experts were asked to listen to the files for not more than three times each, and score them from 1 to 7 (with 7 being the highest) on the evaluation sheet. The experts were also asked to use four criteria for the evaluation, as defined by the researcher, of which two were aesthetic (nos. 1 & 2) and two, stylistic (nos. 3 & 4). The two aesthetic criteria *Musicality in general* and *Originality* had some resonance with the assessment techniques that Hickey (2001) and Smith (2008) used and developed. However, because the improvisation was tested in both baroque and jazz genres, two stylistic criteria *Stylistic awareness of rhythm and form* and *Stylistic awareness of melody, phrasing, and embellishment* were also added for the evaluation.

1. *Musicality in general* was used to assess how colour, tone, or dynamics were being expressed.

2. *Originality* was used to assess the uniqueness of the ideas used in improvisation while maintaining certain stylistic features.
3. *Stylistic awareness of rhythm and form* described the rhythmic and metrical sensitivity to a certain musical form and the balance maintained between these in the improvisation. For example, the rhythm, especially swing feel, is crucial in jazz improvisation, but being able keep the right tempo is also a prerequisite for achieving good rhythm and also fosters a sense of form.
4. *Stylistic awareness of melody, phrasing, and embellishment* assessed how aware the improviser was of the various melodic features typical to a particular style. For instance, how the different phrasing of melodies fit to the whole improvised melody, or what sort of ornaments were applied to embellish the baroque melodies.

The evaluation forms of both IG's improvisation tests can be found in Appendix H.

However, rating the quality of such real-time compositions was challenging. For instance, there is no written point of reference for improvised material, so expert knowledge of the standard features of baroque and jazz was, practically, the only means for rating them. Another issue was the technical ability of each student to play the piano, which was difficult to address at the assessments, but the tasks were not intended to measure it directly. Some impartiality towards the students was, nevertheless, maintained by making the audio recordings of students anonymous to the experts. The video recordings were another data source for the teacher-researcher to gain another, subjectively nuanced, perspective on each individual student's progress in improvisation skills, the challenges facing them, personal traits that may have affected their performance, their perception of musical styles, their enthusiasm, their diligence/disinterest, or social sensitivity about playing with peers etc. Nevertheless, all evaluators were thinking in a fairly similar way throughout the improvisation tests, as evidenced by the similar rate of deviation between the Pre and Post grades awarded to each student.

The assessment scores of each criterion (1-7) were transformed into qualitative meanings (where, 1 = poor; 2 = fair; 3 = moderately good; 4 = good; 5 = very good; 6 = excellent; 7 = outstanding) and their roles were explained in the qualitative contents analysis of each student's case by the researcher.

Qualitative analysis of students' audio files of the improvisation test tasks was carried out by the teacher-researcher (where the student is identified). The teacher-researcher's evaluation were compared to the four evaluators' objective ratings of anonymous audio files and explained by the student's formal and informal music education; their listening and playing habits; the video observations about students' progress in various individual and peer improvisation and practical music activities such as playing-singing, playing along with recorded music, listening, and transcribing; and information regarding the stu-

dent's progress in learning harmony during the improvisation parts of the course as well as over the entire academic year (Chapter 5.5).

5.4.4 Analysis of the questionnaires Q1, Q2, and Q3

The three questionnaires were planned so that both qualitative and numerical content analysis and comparison of the students' scores in the various tasks and music activities of all the 22 lessons of the course could be performed. The Q1 was handed out at the beginning of the course, at the first lesson, while Q2 and Q3 were handed out near the end of each semester. The first part of Q1 gathered information about the students' musical background, current studies, study grades, and major subject; the second part of the questionnaire inquired more specifically about students' previous music education in terms of the music activities they had experienced. The experiences, in both jazz and baroque styles, were assigned numerical ratings out of 7, where 1 = the least experienced, and 7 = the most experienced. The experience was assessed on three levels: (i) to what extent did students use these activities in their previous music theory or aural studies, (ii) how useful did they find these activities during their music studies, and (iii) how skilful did they think they were at these tasks.

However, the first inquiry was found too long to repeat in its entirety throughout the course. After the harmony pre-test, a few activities were also dropped from some of the initial lessons, for instance, the written composition exercises, because of the focus on improvisation. Hence, some questions related to these activities were also dropped from the following two questionnaires. Ultimately, in Q2, the students were only questioned on one level: (ii) about the usefulness of the following tasks during the course in baroque and jazz styles:

- Learning and memorising music by listening silently
- Recognising music by listening, singing, and playing back
- Analysing the score by singing or playing
- Recognising and analysing the score by reading silently
- Writing music from piano playing (dictation) and from recording (transcription)
- Singing and playing tasks on the piano
- Improvising on the piano alone and in pairs or groups
- Playing-along (or singing-along) with recordings and score

The results of the shortened second part of Q1 were then analysed and compared to the results of Q2 and Q3, which were handed out towards the end of each semester (autumn and spring, respectively) when students had enough experience of the various music activities to give them due consideration⁴⁵. The

⁴⁵ Originally four questionnaires were planned. The second one was the original shortened version of Q2 that was handed out after the fourth lesson and inquired students about how useful did they think of the various tasks during the lessons using baroque and jazz material. Because students' answers did not differ from the Q1 regarding the styles, in the future this questionnaire was neglected and the original Q1 was considered as data source.

full-length versions of Q2 and Q3 as well as the original Q1 can be found in Appendix E. Both groups covered the same theoretical issues and musical material in parallel, but the improvisation part was included only in the improvisation phase for each group. This meant that the questions about improvisation were left out of the questionnaires for each group's phase without improvisation (Q2 for the Late IG, and Q3 for the Early IG).

Students' responses (given in numbers: 1 to 7) about how useful they had found the various tasks for their learning progress were transcribed to qualitative meanings and expressions: 1 = not useful; 2-3 = moderately useful; 4 = useful; 5-6 = very useful; 7 = extremely useful, and the degrees to which their appreciation of the various tasks changed during the two parts of course were used as supplementing data for their written comments in the FQ and my observations of the lessons over the entire year.

5.4.5 Analysis of the responses to the final questionnaire (FQ)

The final questionnaire asked students for their opinions about:

- How did their learning of both baroque and jazz harmony progress during the different phases of course?
- How had improvisation helped improve students' knowledge of harmony in both styles?
- how had improvisation helped develop students' aural skills?
- Did learning both genres together in one course work for them?

For the full-length questionnaire, please refer to Appendix E.

Next to each question, a space was provided to encourage each student to explain the reasons behind their choice. All written answers were analysed for content, using a coding technique to detect similarities and differences in the students' answers, similar to the one used in Study One (Chapter 4.4). Each student's answers were analysed both according to the improvisation group they were in and individually. The individual answers were compared to all other data. Conclusions were then drawn by comparing all the results obtained.

5.4.6 Analysis of the supplementary questions

During the data analysis after the course, it became apparent that some further questions needed to be answered by the participants concerning their music listening and playing habits (past and present).

1. What kind of musical styles do you usually listen to and play, in your free time or out of school?
2. Please give a rating from 1-7 for your answers (where 1=seldom, 7=frequently):
 - A) How often have you been listening to baroque music since the age of 14?
 - B) How often have you been listening to jazz music since the age of 14?

It was hoped that this supplementary data, which was gathered via email and added to the data from Q1, would help better explain differences in the ways students developed their improvisation skills. The more detailed written answers were analysed using qualitative content analysis on the same scale of 1-7 (where 1=seldom; 2-3= rarely; 4=occasionally; 5-6= often; 7=frequently).

5.5 Results (part A): Students as Cases

The results of this study are presented in two main parts: part A and B. In part A, all the nine students' cases are presented as individual cases, followed by a description of the main findings drawn from the comparison between the students' cases including how the students' existing knowledge of harmony and musical skills, in particular, the improvisation skills influenced their progress in learning baroque and jazz harmony combined; how the development of harmony knowledge and various musical skills contributed to their learning progress; how piano improvisation motivated students to learn baroque and jazz harmony; how the various peer improvisation exercises contributed to students' development of theoretical and stylistic knowledge and practical skills such as individual and melody improvisation skills with peer accompaniment; how the combined teaching of various baroque and jazz materials, teaching approaches, and other exercises affected students' improvisation skills and their learning progress of baroque and jazz harmony (Chapter 5.6).

The description of the students' individual cases starts with the cases of the students from the Early IG, followed by those from the Late IG, with the same structure in each case regardless of the group. These detailed narratives provided the "raw data" for another qualitative (content) analysis from which the main findings emerged (Section 5.4). The first case of Elliot (Early IG) (see 5.5.1) are the longest in all cases, because it consists of the most detailed descriptions of the test-tasks, results, or lesson activities etc. Nevertheless, the repetition of various circumstances in the descriptions in the following eight students' cases help the reader see each student as a separate comprehensive case.

The starting point of the descriptions was the previous education background, i.e. from Q1: the year and major subject at the University, the instrument training, the formal/informal experiences of improvisation, solfège/ear-training, years of piano and harmony studies in both classical and jazz styles. Data regarding the students' informal musical activities such as listening and playing habits before the course were obtained from their answers in the supplement email questions. Data regarding other experiences related to specific tasks, activities, and learning approaches in both styles, based on the students' self-reports in the first questionnaire, were also taken into account. Another important source of the students' existing basic and stylistic knowledge of baroque and jazz harmony and aural skills was their pre-harmony test, which provided both a detailed and comprehensive picture of how the students could

apply their existing knowledge in writing, analysis, and transcription techniques. The results of the pre-harmony tests and data about students' music background were examined together when searching for possible answers for their individual achievements.

In each case, the student's educational background is followed by the presentation of progress in harmony knowledge in both baroque and jazz genres over the entire course. This section particularly focused on the results of the two post-harmony tests (Post 1 and Post 2), but the interpretation of the test results is further supported by the notes from my observations during the lessons. The presentation of the development of the harmony knowledge is followed by a detailed description of the progress in the improvisation skills of the student during the improvisation part of the course. Information regarding the starting level of the skills was taken from the pre-improvisation test tasks in both baroque and jazz genres. The students of the Early IG had to perform a single individual improvisation task, while those of the Late IG had to perform both group and individual improvisation tasks in both styles. The analysis of the test tasks was based on the four evaluators' objective ratings of the anonymous audio files as well as my own qualitative findings as the teacher-researcher of both the video and audio files of these tasks (in which the students are identified). Data regarding the development of improvisation, i.e. improvising both alone and with peers, during the improvisation phase was taken from the video observations during the course and supported by the observations about the students' progress in other practical music activities such as playing-singing, playing along with recorded music, listening, and transcribing. Furthermore, information regarding the student's opinions about their progress in learning harmony over the entire year was obtained from the FQ. The post-improvisation test results were also presented to highlight the level of development in the improvisation skills of each student towards the end of the course.

Finally, I provide an overview of each student's overall learning progress, based on the overall results and students' comments about their learning progress in the different phases of course (provided in the FQ). This summary, in particular, highlighted the timing of improvisation regarding the learning process, the effects of various learning techniques, tools, musical activities, materials, the effect of the cross-use of both baroque and jazz genres on the students' achievements, and motivations behind learning harmony with and without improvisation.

5.5.1 Elliot (Early I G)

5.5.1.1 Starting level of Elliot's knowledge and musical skills

Elliot was a first year student in Music Education. His main instrument was the drums, but he had studied jazz piano for two years and classical piano for one year. Because he was a first year student in Music Education, he had not taken the free piano accompaniment (vapaa säestys) course before the current harmo-

ny course. He had extensive music theory training: 12 years in classical and 5 years in jazz genres despite his modest remark: "...considering the basic theory courses". He also had five years' experience in improvisation via formal training, but he had a neutral opinion about his previous informal experiences improvising with other musicians, e.g. peers, or alone in classical or jazz genres. Furthermore, he had 12 years of solfège training. He also explained in the email questionnaire that he generally listened to and played rock and jazz in his free time. He added: "...I seldom listen to classical music (although I like it)".

Elliot's starting level of harmony knowledge, in general, seemed to be very good. His total score was 84%. Slight differences could be found in the total scores between the genres: 73% for baroque and 87% for jazz. The main reason behind this was the fact that he entirely omitted the baroque figured bass writing task as did others in both groups – some of the students had never learnt figured bass or never played keyboard accompaniment by using figured bass notation. In contrast, he achieved 100% in the task involving chords analysis of a baroque extract by Roman numerals. A slightly lower achievement could be seen in the aural recognition of basic triadic harmony (84%; baroque chords), in contrast to that of seventh chords (95%; jazz chords). This difference could be considered negligible, but it is interesting that he had problems recognising the augmented and diminished triads while he perfectly solved the tasks with these chord qualities in the case of seventh chords. He also recognised and identified quite well the II-V-I and cycle of fifths chord progressions and seemed to have problems only with the colour-tones. He perfectly solved the jazz chord analysis task, except for a few misunderstandings related to the use of symbols. The same proficiency could be found in the jazz chord and chord progression writing tasks that were definitely related to the five years of his jazz theory studies. He perfectly worked out all single chords from the lead sheet symbols (100%) as well as managed to perform the most complex II-V-I chord progression voice-leading task very well (86%). He appeared to have had not only stable theoretical knowledge in terms of chords and chord progressions but also good overall aural skills (All Aural Tasks: 85%). Interestingly, compared to the jazz harmony knowledge, he performed the jazz pattern transcriptions less successfully (40%). The majority of the incorrect notes were the chromatic notes in the II-V-I chord progressions. My supposition was that the active listening, aural analysis, and melody transcriptions and improvisations, especially the melody improvisations with peers during the lessons, would lead to a positive change in his stylistic knowledge and jazz melody transcriptions. In contrast, he managed to almost perfectly transcribe all three baroque variations (98%) with only the missing sharp for the leading tone in the harmonic minor.

5.5.1.2 Increase in Elliot's harmony knowledge during the course

The results of Elliot's three harmony tests are illustrated in Figure 15. The results of the post 1 harmony test showed that Elliot made progress in grasping certain theoretical elements such as the harmonic minor or chord inversions by the end of the first part of the course. His understanding of the voice-leading

technique from the figured bass developed to a great extent. The exploration of harmonic embellishment by listening to baroque variations and analysing them from the score and through improvisation seemed to be affected positively by his knowledge and skills. In the post 1 harmony test, he recognised and transcribed almost all of the given triads and their inversions correctly with which he had problems before, but he made the most notable progress in the chord progression writing task from the figured bass. He solved the task to an accuracy of almost 100% and the only mistake was the correct voice-leading of the leading tone with regard to the common practice of the Baroque and Classical era. Therefore, he still had to practice the harmonic minor in various musical contexts. Nevertheless, he showed improvements in recognising the leading note in the three baroque variation transcription tasks. In the second transcription, unfortunately, he misplaced the whole pattern from the second bar to the end. It is interesting that this second variation of the three was replaced in the post test for a slightly easier stepwise melody than in the pre-test. I graded these kind of mistakes as half correct answers because in such a case, not all the notes were marked as wrong, as the pattern was nevertheless right. That was the reason why he got a lower score in the baroque transcription tasks than in the pre-test. In contrast, he managed to excellently solve the chord progression analysis task (100%). Overall, in the baroque harmony, his test result improved by 21 percentage points, i.e. from 73% to 94% of the maximum possible scores.

At the end of the improvisation phase, the results of the post 1 harmony test indicated that his high jazz theory knowledge, overall, remained the same, at around 90% of the maximum test scores. The main reason behind the lack of increase in the test score was that all tasks related to the basic jazz chords such as chord writing, analysis, and aural recognition had already been solved to almost the 100% grade in the pre-test. In contrast, he now also perfectly (100%) solved the most complex theoretical voice-leading writing tasks of II-V-I with all learnt colourations and additional notes. Furthermore, he improved in recognising these colourations in the II-V-I and cycle of fifths chord progressions by listening. It seemed that, in his case, practicing the various accompaniments of different chord progressions such as cycle of fifths with either the play-along recordings or with peers was especially beneficial to his theoretical understanding and aural skills. The practical application of theory together with the improvisation enhanced also the practical skills, such as piano accompaniment and improvisation skills, that could be seen in the video recordings. Therefore, it seemed that theory and practice had a mutually positive effect on each other. In addition, the most significant improvement could be found in the two jazz pattern transcription tasks in the post 1 harmony test that improved by 34 percentage points, i.e. from 40% to 74%. Few alterations were still missing in both patterns that were the most difficult parts in the patterns. The improvement in applying the various embellishments in playing variations and improvising melodies in jazz was observed especially from the sixth lesson onwards. Therefore, the melody improvisations, listening tasks, and solo transcriptions seemed to have affected each other positively. The excellent rates and feedback

for the post improvisation task suggested that the melody improvisation and solo transcription activities also mutually supported each other.

The results of Elliot's post 2 harmony test were generally excellent. The result of the post 1 harmony test showed that Elliot started the second phase of the course with great improvements in aural skills, especially in jazz transcriptions. Furthermore, by the post 2 harmony test, he had acquired a stable theoretical knowledge in jazz in terms of voice-leading and recognition of chords and chord progressions both from listening and the score. The theoretical improvement was correlated with the improvement in transcription skills, especially with regard to the II-V-I chord progressions, because the dictated jazz patterns were based on the II-V-I chord progressions. All of these skills in jazz remained at the same level or even further improved to the maximum limit by the end of the course. It also seemed that learning the two genres together positively affected his theoretical and practical knowledge in harmony and jazz transcription and stylistic improvisation skills as well as his creativity in composing original sound. For instance, he applied modal scales in both baroque and jazz post improvisation tests resulting in C Mixolydian as the key. He also applied a few particular embellishments from baroque into jazz improvisation and vice versa. By the end of the course, he appreciated learning baroque harmony with jazz harmony, as he commented in the FQ: "...since there are some similarities in these styles, e.g. basso continuo compared to walking bass. Also, any style learned is naturally a step forward".

The only significant drop was in the baroque figured bass writing task, in which Elliot did not pay attention to the voice-leading, despite the fact that this was a recurring topic during the second phase of the course.

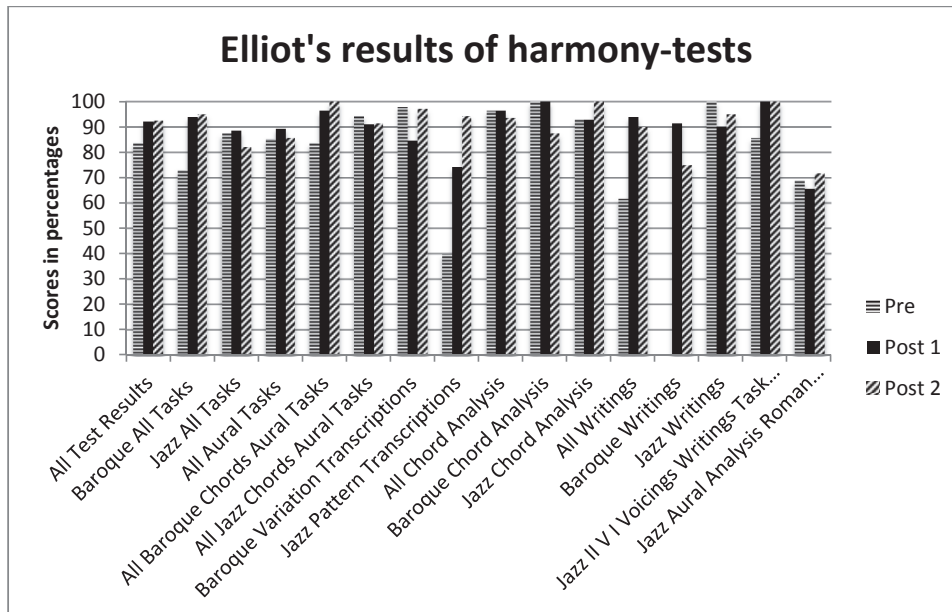


FIGURE 15 Elliot's harmony test results

5.5.1.3 Development of Elliot's improvisation skills

Elliot's improvisation test results are presented in Figure 16. I shall first describe Elliot's pre-improvisation test results (first baroque, then jazz) and then discuss his overall learning progress in improvisation during the course, and, finally, I shall present his post improvisation test results (first baroque, then jazz).

While listening to Elliot's short pre-improvisation file in baroque, my overall impression was that he definitely had certain stylistic knowledge and musical ideas. He improvised a seven-bar-long question-answer period in C major, in 2/4 meter, accompanying with the C and Dm chords on every bar. He started with chord C and finished with it. The improvisation sequence was seven bars long. Because he did not extend the final bar with the tonic chord to the eighth bar, the form did not sound perfect. He played with slight stresses on the first beats of each bar that made the musicality slightly flat. This might have connection to his comparatively less piano training, especially the only one-year studies in classical piano, in contrast to his jazz training, and the fact that he "...seldom listens to classical music (although he likes it)" (mentioned in his answers to the supplement email questions). These little stresses, however, may also be a result of the stops and pauses taken while hesitating to continue the musical phrase. At the same time, these pauses can also be viewed as good signs, implying that he was listening to what he was playing and tried to figure out how to continue using his inner-hearing. The longest pause could be heard at the middle of the musical sentence, after he improvised a musical question using the notes of C major within a perfect fifth, stopping on D using a dotted rhythm and Dm chord as the accompaniment. After this stop and his hesitation he formulated a wider-scale melody reaching the 6 (note A) as an answer. Indeed, these stops and pauses also resulted in tempo changes and affected the musicality of the performance in general, especially the colour and tone. The shortness of the melody also affected the dynamics so that it was difficult to build up and quiet down. Overall, Elliot got relatively different ratings by the four experts for the colour, tone, stylistic awareness of rhythm and form, awareness of melody phrasing, and embellishment. My point of view was that Elliot used the dotted rhythm well and maintained a good balance between the dotted rhythm and quavers during the whole musical sentence. During the first phrase, he placed more emphasis on the dotted rhythm, for instance, at the end of the phrase in the question phrase while using simpler melodies, whereas in the answer phrase, he used these tools the opposite way. I found the phrasing very good in contrast to the melody embellishment and form that probably could be developed further if more musical sentences were played. Similarly, the originality of the improvised music also could have improved over few more musical sentences. Overall, Elliot seemed to have a good sense of using certain rhythmical and melodic elements associated with the baroque style that seemed to be a promising starting point of his learning process in terms of both theoretical and practical knowledge.

When I listened and analysed Elliot's first jazz improvisation on the C and Dm chord progressions, I assumed that this was the style that he was more familiar with than the baroque style. He improvised a nine-bar-long musical sentence, not as carefully structured or thought out as the baroque improvisation, but it sounded much livelier to me. He played with much more ease and with no stops or hesitation. I felt that he really "played" with the improvised melody phrases and rhythmical elements in a good sense. He accompanied the melody with C and Dm on each bar (over eight bars), starting with the Dm with upbeats and finishing the phrase with C chord on the ninth bar, establishing the key in C major. The chord Dm7 also could be heard on the fourth bar at the middle of the musical sentence as well as the added 6 on C at the end, indicating that he applied the theoretical knowledge quite well in practice. Elliot used the chords as accompaniments by separating the bass note of chord and playing many variants of syncopation with the inversions of the chords. Perhaps the dynamics could have been more expressive, but the stresses and syncopation together gave interesting characters to his playing and a good original sound. The good choice of medium tempo also allowed him to express the differences between the smaller motives in terms of rhythm and melody. The small phrases, three and four, in each part of the musical sentence started with upbeats and the melody was built up and down within of the two parts. In the second part, the melody and rhythm were variations of the first melody. Overall, the melody embellishment was very good and the whole performance reminded me of the saying "less is more". The evaluators' scores were more similar in jazz than in baroque for stylistic awareness of rhythm, form as well as the melody, phrase, and embellishment, with an overall rating between good or very good. Overall, Elliot appeared to have had certain experience and knowledge in terms of the rhythmical and melodic traits of jazz that definitely could be connected to the five years of his formal jazz studies including harmony and improvisation, the two years of jazz piano and to his main instrument, the drums. Furthermore, he had been playing drums in bands for many years, often listened to jazz, and generally played "*a variety of pop, rock and jazz-genres...*".

Elliot's progress in improvisation skills and other practical skills during the course reflected his solid background in both theory and piano playing; he also showed major progress in the more detailed stylistic aspects. With regard to baroque skills, Elliott's 12 years of classical music background, including learning the piano for one year, provided a solid ground for deepening his own ideas on Handel's chaconne chord progressions, as highlighted in my video observation notes: "*... He plays very (Baroque) stylish phrases and own moderate ideas by ear, very good!*" Even though the fact that he "*...seldom listens to classical music (although he likes it)*".

From the very beginning of the sessions on the various improvisation tasks, Elliot was eager to challenge himself to play either with me or with other students. While improvising the baroque variations, he seemed a little shy and participated in it only at the third lesson. During the first two lessons, we used basic material: a simple descending four-note-long baroque chaconne bass (l, s,

f, m with Relative solfa) and chord progression based on Pachelbel's Chaconne in F for organ, transposed in G minor: i-v6-iv6-V (Gm, Dm/F, Cm/Eflat, D). First, we listened the original opus in F, than identified the chords and chord progressions by ear. We sang and played back the heard voices of the chords, the full chords from the bottom and top, and the chord variants from the recording and piano. Finally, we checked them from the score and also analysed new variations from the score. At the third lesson, we started to explore the various types of melody and bass embellishments by listening, singing/playing, and transcribing.

By the third lesson, Elliot gained some knowledge about the material and idea for making melody variations on the chaconne chord progression, as he heard some improvisations on this subject. First, I started to play the chaconne bass pattern; then, I added the chord progression in medium slow 3 meter. I continuously played the accompaniment at the lower register of the piano, but I sometimes changed the positions of the chords creating new a melody on the top. If the students were uncertain about what to play at the beginning, I let them play the original theme first and encouraged them to improvise with variations. Elliot's first try sounded very organised as he built up the variations step-by-step. The first melody was already his own theme, and the following variations were combined by stepwise melodies, upper neighbour notes (auxiliary or changing notes), chord figurations, turns, and repeated notes, mostly with dotted rhythm. He played five variations because he misplayed the first figuration, ("...and he laughed..."), but he originally wanted to improvise with four variations. At that point, I realised that I disturbed him with my accompaniment because I also embellished the top voice of the chords' upper and lower neighbour notes, making the chords sound different. Therefore, in the following activity, I kept the basic chords and only changed the chord positions. It seemed to me that he needed to explore and experience the dominant chord embellishment, because he embellished it only the first time (theme), as at other times, he just stopped on the leading tone of G harmonic minor. I noticed that Elliot had problems recognising the leading note of the harmonic minor from the beginning of the course also seen in the baroque transcription task of the pre-harmony test. Other students also had problems with this (including those who could not finish the course); therefore, at the fifth lesson, I spent more time exploring the harmonic minor scale in theory and practice. From lesson six onwards, the scales were the area of focus in the jazz material. Therefore, I understood that he needed more time to practice this subject. He also tried different rhythm variants beyond the crotchet and quavers using the dotted rhythm and slide embellishment with semiquavers and demisemiquavers. In contrast to his first try, his latest ideas sounded quite good and fitted well with my accompaniment. There was also a good balance between the rhythmical and melodic variations within each phrase and the preceding or following variations. Some of them were very stylish, in line with what we had explored during the last lessons; however, some of them certainly needed improving. Nevertheless, at

least he listened to my accompaniment and played with a good feel for rhythm and rhythm ideas.

In the following lessons, we further explored the melody embellishments and chord variants as a result of the voices. New materials were also presented such as the minor variations of Handel's Chaconne in G. We listened, memorised, sung, and played the non-chord tones, discovered the cycle of fifths chord progressions with various chord inversions, delved deeply into the scales, analysed non-harmony notes, particularly the suspensions, by listening and from the score, and transcribed chord progression variants. We also explored the figured bass marking through these music materials by recognising the intervals as figures firstly by listening and secondly from the score. Because many students did not know the figured bass notation, it was important to learn its basics. We worked out the triadic chord progressions in various positions paying attention to the voice-leading, but I also encouraged the students to play the chords freely, without having to follow the strict voice-leading rules. In this way, they were able to improvise alone simple and interesting melodies by playing the chord progressions and were more prepared to create simple rhythm variants on the simple melodies.

In lesson six, Elliot improvised very long melody variations on the same chord progression accompaniment that he also tried at first at the third lesson. I accompanied him more colourfully in terms of varying the chord positions and voice-leading. Elliot began to play very simple variations that sounded much better and clearer than the following more difficult melodies. He tried to vary a little too much, but he eagerly kept exploring what fitted more with my accompaniment and the given chord progression. He tried to embellish the dominant chord that he needed to practice before. Actually, he forced too much using the harmonic minor scale and leading note, resulting in a dissonant sound with the other triads. Nevertheless, he noticed this and attempted to correct them immediately when he misspelled the note, but this way, he fell out of the tempo; he realised this gradually. Other times when the notes did not sound dissonant but did not fit well either, he waited on the beat or repeated the note like a suspension and then corrected them with the next phrase. This way, he made much better decisions about how to go on. His rhythmical variations, such as playing with triplets, also sounded original, reminding me of the pre-improvisation test in which he already used interesting rhythmical ideas. The musicality of this performance was a little flat because neither did he dare to explore the possibilities in the tone of the colour nor did he build up the dynamics. Nevertheless, I valued his attempt at taking risks in this improvisation to explore the harmonic minor. Furthermore, the merit of this attempt was also that he tried to build up and down the melodies bravely using more registers and did not restrict himself to an octave interval.

Aspects of jazz improvisation were introduced somewhat later than the aspects of baroque in the course. During the first five lessons, along with the baroque material and practicing basic theoretical issues, we learnt the theme and chord progression of Autumn Leaves by listening to recordings and com-

paring to the lead sheet. With similar learning approaches at the third lesson, we explored the cycle of fifths with seventh chords in various inversions and played and sung the chord progression from different starting positions. Furthermore, we got acquainted with the swing feel, upbeats and syncopation, and the various rhythmical possibilities to play the theme of Autumn Leaves by listening to solos and play-along accompaniments. We also transcribed all of these elements of theory from recordings and from my piano playing. At lesson five, I challenged the students to play the chord progression of part A from the Autumn Leaves with a real play-along recording and with the lead sheet score. We played only the A part because this part was based on the cycle of fifths and was in the G minor key, as we had learnt the Autumn Leaves in that key. The reason of choosing the G minor lead sheet of the song was to make it easy to connect the similarities of the cycle of fifths to the baroque variations of Pachelbel and Handel.

At the first video recording of the jazz improvisation, Elliot was the first student to attempt to play the chord progression with the right hand with various positions leading the voices as we had learnt, while I played the walking bass. The play-along recordings gave the drum pulse that was important to hear at least at the beginning of the process of learning the accompaniment with the various syncopations. He played it with excellent rhythm (he is a drummer) and upbeats. He played the cycle of fifths starting from the root position and second inversion of Cm7 (IV7 in minor). In the second round, he tried very stylish short melodies with chord breaks and chromatic passing notes. I especially liked these short melodies very much. Whenever he misplayed, he kept playing and tried to correct the mistake by listening and exploring different phrases and notes. His first performance definitely showed his previous education in jazz. We played along the recording four times, and because he seemed to have no problems with keeping the tempo, I switched on the play-along recording and played along. In the third round, he misplayed the A half diminished chord (II7), so he could not find the dominant chord. However, as he searched for the right position, he accidentally embellished the dominant chord with chromatic passing notes that sounded so surprisingly good that he started to laugh and I stopped playing the walking bass (everybody laughed). This incident did not interrupt him and he continued the progression to two bars after.

In Lesson six, we delved deeply into the structure of the cycle of fifths in both baroque and jazz and explored the II-V-I cadence basic elements of jazz improvisation. We also learnt a new jazz standard, Fly Me to the Moon, based on the cycle of fifths and listened to Diana Krall's recordings and transcribed a short part of her solo. We also practiced to play along the Autumn Leaves theme with the same play-along recording in G minor that we used in the previous lesson. First, I showed them by playing the melody (both A and B parts) in a simple way; then, I showed some simple rhythm and melody variations on the theme. By playing variations, as done with the baroque material, I hoped to encourage the students who had fewer experiences in improvisation, especially on the jazz standard theme. When I finished my demonstration of playing

along with the recording, I asked the students to try improvising without it. Because the recording kept playing, Elliot was eager to join in and play the melody immediately. He heard very well where he could join in the second line. It also seemed that he had good stylistic taste playing fine variations with excellent rhythmical ideas. When he misplayed a phrase, he started to desperately find the right note by playing upwards on scale that accidentally sounded like a series of triplet rhythms. He started to laugh and so did all the students as he noticed that this accident ended up creating a really nice and original phrase. It also seemed that the play-along with the recording and other musical activities performed during the two subsequent lessons as well as the new teaching material positively affected his learning progress. His rapid development could also be attributed to his strong jazz background as a drummer and listening habits: *"I play and listen to a variety of pop, rock and jazz-genres..."*.

Nevertheless, by the eighth lesson, when we explored the seventh chords, cycle of fifths chord progressions, and II-V-I chord progressions with various extensions and colourations, all the students became more accomplished with the accompaniments. The teaching material in baroque also placed emphasis on the cycle of fifths chord progression, as new excerpts were included into the teaching material from Handel's Messiah that consisted of the cycle of fifths with sevenths. Altogether the students at the eighth lesson dared to improvise together in trios on Autumn Leaves first time without the score and without my assistance. Elliot was keen on improvising all parts of the music in trios starting with the chord accompaniment with the other two students playing the melody and bass improvisation. First, I also played the play-along recording because I thought this would help maintain the rhythm. However, interestingly, Elliot provided a stable tempo without the recording and became a kind of a leader of the trio. He became the "drummer" keeping the pulse and supporting the other voices, even the bass in which the student was not very accurate. They played the whole standard many times, and Elliot became more and more original in terms of rhythm ideas, and during the last few rounds, he turned the chords more freely without any mistake. I noticed that he developed greatly. When he changed the part in the trio while improvising the melody, he focused on improvising rhythm variations on the sequential melody. Many of these phrases were quite interesting despite the fact that he did not embellish the melody. Occasionally, when he was uncertain of the new ideas, his rhythm and tempo were not very accurate. Finally, he was happy to play the bass. He played stable bass notes with upbeats, but he did not dare to play the full walking bass yet. He tried to embellish the bass notes sometimes, similar to the accompaniment. In the last lesson and last video, however, he played the bass in the trio and he improved significantly while improvising the walking bass. They played the entire song four times and by the third time, he ended up improvising almost the full walking bass lines. By the end of the improvisation phase of course, he became the most accomplished with the walking bass.

With regard to the baroque improvisation, Elliot's post- improvisation test performance seemed more matured than the pre-improvisation test results.

Overall, his playing sounded very musical, well organised in structure, and fluent without stop and hesitation. The evaluators also assessed the musicality in general as very good, one of the piano pedagogues even rated it as excellent. He played a nine-bar-long melody in $\frac{3}{4}$ meter, in medium tempo and changed the chords on the first beat of every bar. Improvising in $\frac{3}{4}$ meter was a good choice, as the majority of baroque variations we learnt and improvised on were based on this meter; therefore, he was more experienced and confident in it. Because he started and finished the performance with C major chord, I had the impression that he wanted to establish the key on C (C Mixolydian), which resulted in the extension of the whole improvised line to the ninth bar. Unfortunately, this affected the form that could have been solved better had he played the Dm chord on the third beat of the eighth bar. This was already a problem in his pre-improvisation test where he finished the improvised melody on the seventh bar. It seemed that despite his fine musical ideas, he needed to improve the sense of form in order to be able to improvise the traditional eight-bar-long period. However, from another point of view the composition sounded quite original because of the length of the phrases in bars: 3-2-2-2 or 3-4-2. This is a difficult concept and needed more practicing than we did during the lessons. I realised at this point that I should not have entirely rejected the written composition exercises from the course (Section 5.3.4). Elliot would have benefited from these activities if he notated down his ideas in a given frame, for instance, an eight-bar-long period.

Nevertheless, he constructed the rhythmical ideas very well, starting with the compound duple rhythm (minim and crotchet) and continuing with the crotchet and quaver motion, as the melody developed to the four-fifth bar. At the second half of the melody (from the fifth bar), the dotted rhythms emphasized the “top” of the improvised melody that was followed a melody combined with crotchets and minim, naturally slowing the melody down to the tonic note. It seemed that most the evaluators also highly valued the rhythmical ideas. Meanwhile, the form was not generally rated as good as the rhythm, probably because of the nine-bar-long structure. The rhythm also sounded in harmony with the melody in terms of the construction of the improvised line. Elliot included all of the elements of melody embellishments, based on Pachelbel and Handel’s chaconnes, that we learnt and practiced during the lessons in various ways such as through listening, analysing, singing, and playing on the piano and improvising. He improvised on modal scales such as the C Mixolydian scale on C with the D natural (Aeolian) minor on Dm that he also embellished with the harmonic minor. The first simple three-bar-long melody behaved like a short question and answer, in which the first phrase consisted of an upper neighbour note (B flat) on the Dm chord, resulting in a natural minor sound (Aeolian), followed by an ascending phrase combined with a lower chromatic neighbour note C sharp that behaved as a leading note of the D harmonic minor and fit very well in the Dm chord. This phrase sounded stylistically excellent considering the embellishments of chaconnes that we had learnt. Also, it showed his improvement in understanding and using the harmonic mi-

nor scale properly, something he found problematic in the first couple of lessons. However, he suddenly played a minor 6 leap up to B flat that sounded accidental with the C major chord, despite using the C Mixolydian. In my opinion, although it was consciously played as an upper neighbour note (*appoggiatura*) to the note A as a chord note of Dm on the next bar, it did not fit very well in this melody. Perhaps, he applied those techniques in baroque that sounded better in jazz improvisation.

Nevertheless, I appreciated the fact that he took the risk to explore such theory in his improvisation. The rest of the melody consisted of two descending sequences that sounded very nice as they sounded simple while fitting in with the style. The experts' opinions on melody phrasing and embellishment were similar to a large extent. Perhaps, while those chromatic neighbour notes were viewed as weird sounds by all of us as experts, they could also be viewed as very original ideas. Indeed, most of the experts rated him highly in terms of originality. Overall, I valued Elliot's effort to apply all of those theoretical and practical elements that we explored not only in the baroque harmony but also in jazz harmony during the improvisation phase. It seemed that practical skill development and progress in learning harmony mutually affected each other, as evidenced by the development in baroque harmony in the post-harmony test.

Elliot's jazz post-improvisation test performance had some resemblance to his baroque post-improvisation test performance in terms of modality and structure. In particular, when I listened to both audio files one after the other, I realised that he applied many theoretical and rhythmical elements and melody embellishment techniques from one genre to the other. For instance, similarly to the baroque improvisation, he coloured the C major chord with the C Mixolydian scale that actually extended the C chord to C7. The application of modal scales in both improvisations must have been inspired by the jazz scale theory that was, however, explored in the current course at a very basic level. Also, with regard to the melody embellishments, he applied few turns and *appoggiaturas* to the baroque improvisations that were explored in the jazz improvisation. In contrast, he applied those stepwise sequential embellishments and suspensions, learnt from the baroque material, in the current jazz post improvisation. I had assumed that Pachelbel's Canon had especially influenced his ideas during the last two lessons, particularly, in terms of melody variation resulting in certain suspensions. The cross-application of these elements resulted in an interesting and quite original sound. All of these background issues were unknown to the evaluators, who rated the audio files in a random order and assessed Elliot's improvisation rather differently, albeit highly for all the criteria in both styles and tests. The least difference was between the rates of originality, assessed as very good overall, similar to my assessment. This was the first time when I really heard that Elliot was conscious of building the dynamics smoothly over the whole musical sentence and, at the same time, coloured the tones with fine stresses that fit the syncopation well.

The rhythmical ideas were based on the upbeats, syncopation, and were closely related to the descending melody and embellishments, resulting in the

suspension of notes on both C and Dm chords. These suspensions gave the whole composition a tension that finally resolved. This tense was also emphasized by the two descending melodies over two octaves in a four-four-bar form. The eight-bar-long periodic form was much clearer than the other improvisations, but the half-bar upbeat at the beginning was not perfectly convincing, regardless of it being accidental or planned. The two, generally, more positive experts seemed to have been highly impressed by the performance: the piano pedagogue rated the musicality and stylistic criteria as outstanding, while the music theorist, as excellent. The evaluators, who were usually more critical, especially in jazz improvisation, because of their expertise had a neutral opinion about these criteria. They rated them as good. However, these ratings were still higher than the ratings Elliot achieved in his pre-improvisation performance.

Overall, I noticed a great improvement in Elliot's improvisation skills in terms of creativity, musicality, as well as the stylistic awareness of melody phrasing, and melody embellishments of rhythm and form.

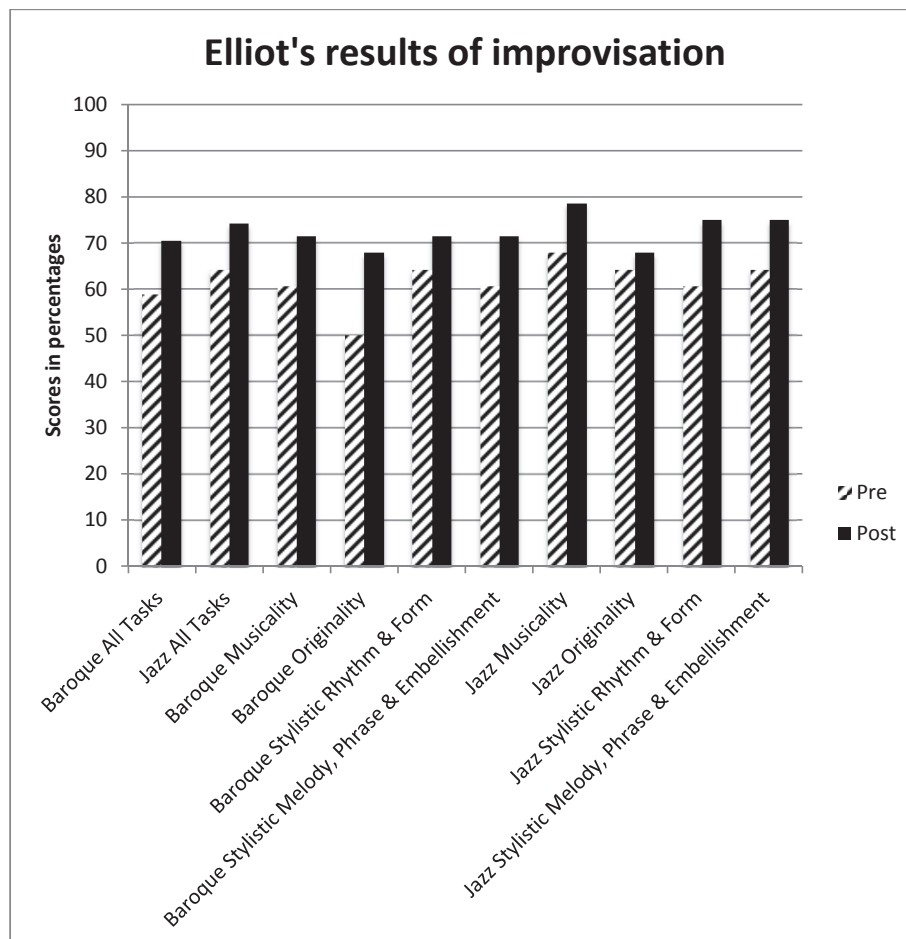


FIGURE 16 Elliot's improvisation test results

5.5.1.4 Elliot's overall progress and motivation behind learning harmony with and without improvisation

Elliot developed his theoretical knowledge mostly during the first improvisation part of the course in both styles, reaching an excellent level of knowledge. These results mainly remained at the same level or even further improved to the maximum level by the end of the course. The development in the second phase (without improvisation) was mainly due to the successful use of jazz melody transcriptions, indicating that even though Elliot had a relatively stable jazz background and excellent aural skills, the technique of notating down various melodies needed more time to develop. Therefore, his aural skill development, especially in melody transcriptions, was not exclusively due to the improvisation exercises. The regular dictation and solo transcription activities during the second phase of the course should have strongly contributed to his development. Nevertheless, it seemed that the combination of learning the two genres together positively affected his theoretical and practical knowledge in harmony over the entire academic year. This was evident at the end of the improvisation phase, when he combined certain theoretical elements from each genre in the post-improvisation tests. By the end of the course, he showed an enhanced ability to transfer his harmony knowledge from one style to another style and, based on his comments in the FQ, he appeared to have recognised this potential himself too.

During the entire course, but especially during the first part, I noticed that Elliot was most interested in learning the theoretical elements related to jazz. This curiosity certainly originated from his education background. Also, he focused on the improvisation technique, as he was eager to experiment and challenge himself in the various improvisation activities, either alone, with me, or with other students. He also made the following comment in the FQ: "*...once you get into the improvisation, you may spend...more time experimenting the phenomena. ... When you come up with your own ideas in different contexts, the learning experience is stronger, I believe*". His appreciation of the usefulness of both individual and peer improvisation activities in both styles is clearly reflected in these comments, and this appreciation was also in line with my observations during the improvisation phase of the course. His ratings for the usefulness of improvisation increased remarkably on the 7-point rating scale during the course – from *not useful* to *extremely useful*. It would be interesting to identify the reason behind the low ratings at the start of the course: the ratings were probably influenced by some misunderstanding, as he had formal experience in jazz piano and improvisation and also informal experience of playing pop music in bands. However, it is not known how he had learnt the formal improvisation techniques, e.g. which ways (individually, with playing-along recordings, or with peers) and what kind of music context, as he made the following comment on the task of improvising freely on the G major scale with me at the third lesson: "*I have never done this before*".

His opinion about the benefit of other tasks such as the sing and play and play-along with the recording changed very much over the improvisation part

of the course, in line with my observations during the lessons. Meanwhile, his opinion no longer changed much by the end of the year, perhaps because these tasks only substituted improvisation during the latter part of the course; he commented, *“At least learning the song Beautiful Love and experimenting with it a little helped me recognize and memorize some chords that I did not know before...”*. Overall, based on both Elliot’s comments in the FQ and my observations during the lessons, it seemed that Elliot was really motivated to learn through improvisation and that he felt that his theoretical knowledge improved more during the first improvisation phase of course than the second phase without improvisation. Elliot’s interest in improvisation was probably one reason why he participated in an additional free piano accompaniment (vapaa säestys) course during the second part of the course; therefore, he could keep practicing accompaniments and improvisations to compensate for the lack of improvisation in the current harmony course. Altogether, it can also be said that motivation was really important for the further development of Elliot’s skills during the course.

5.5.2 Melanie (Early IG)

5.5.2.1 Starting level of Melanie’s knowledge and musical skills

Melanie was a first year student in Music Education, (Master’s student in languages). Her main instrument was the violin, but she had studied classical piano for one year. Also, she had six years of training in classical harmony and solfège. She had not studied jazz piano or jazz harmony. She could not participate in the free piano accompaniment (vapaa säestys) course before the current harmony course because she was just a first year student in Music Education. She received approximately two years of formal improvisation experiences, mainly with the violin and in the classical style: *“...it is hard to estimate, but very little”*. Melanie also had very moderate informal experiences with improvisation either alone or with peers: *“...every now and then”*; however, *“... I do a lot of piano accompaniment to Christian hymns at student meetings,... [playing] pop songs both with guitar and piano”*... (mentioned in response to my email questions). Also, she remarked that she generally listened to and played pop and rock music: *“...Lately I’ve been into jazz: about last year (as well as this year), I listened old jazz classics, ... and played some jazz standards. [...]Before university, since the age of 14, I mostly listened to pop and rock, less Jazz”*. Nevertheless, she had actively been listening to classical and baroque music since adolescence.

Overall, Melanie’s pre-harmony test results were very good, i.e. 84% of the maximum. The test indicated extensive and solid knowledge in basic harmony including triads, seventh chords, and complex chord progressions. She appeared to have outstanding aural skills: she could recognise all the triads (100%) and most of the seventh chords (96%) in any position and transcribe them by listening. She also achieved 100% in all melody transcriptions in all three baroque variations and in both jazz patterns. These results could be connected to her extensive classical music studies including the 6 years of solfège, 6 years of classical harmony, and 12 years of playing the violin.

She could also recognise all the basic elements (the quality of seventh) in both II-V-I and cycle of fifths chord progressions by listening. In these tasks, she only omitted the identification of the colourations because she had received no formal jazz harmony, jazz piano, or free piano accompaniment training before the course. With regard to the theoretical writing tasks, she completely left out both voice-leading tasks, i.e. the baroque chaconne chord progression from the figured bass and the jazz II-V-I chord progressions with colourations. Also, it seemed that she had problems identifying the more complex chords used in jazz from lead sheet symbols, whereas she perfectly analysed the chord progression of baroque variation by Roman numerals from the score. Altogether, Melanie's starting level of harmony knowledge and her overall musicianship seemed to be excellent as she could recognise by listening those elements of music that she was more uncertain about in writing. These results suggest that she was an intelligent musician, and I was curious to see how she would progress with the deeper stylistic knowledge in both baroque and jazz harmony during the course and especially with the application of improvisation.

5.5.2.2 Increase in Melanie's harmony knowledge during the course

The results of Melanie's three harmony tests are illustrated in Figure 17. Melanie achieved outstanding results in the post 1 harmony test with an overall score of 92%. She already had good fundamental knowledge of harmony and outstanding aural skills at the beginning of the course that further improved during the first improvisation phase. She completed all voice-leading writing tasks with both baroque chord progressions from figured bass and jazz II-V-I with colourations from Roman numerals that were omitted in the first test. She successfully grasped the voice-leading technique because of her solid classical harmony background as well as the effect of improvisation activities during the course as she commented: "...voice-leading was clearer in the experiment group [improvisation phase] because we had to play them ... therefore think about it more". Also, she appeared to have perfectly learned the more complex jazz chords with various extensions and colourations that she was uncertain about in the pre-test. She also successfully completed both tasks in which she had to identify the chords from the written score and vice versa. She was only uncertain about recognising the colourations of jazz chords played on the piano in the context of chord progressions, but she showed an improvement in this task since the pre-test. Altogether, her remarkable performance in the style-specific harmony tasks, in both theory and practice, suggested that the piano accompaniment and improvisation tasks had contributed to her learning process.

Melanie's overall score for the post 2 harmony test was 98%, so according to the assessment criteria of the course, her knowledge level had improved to the highest level. She appeared to have acquired solid theoretical knowledge in jazz since she managed to recognise all colourations of the seventh chords in the II-V-I and cycle of fifths chord progression by listening. She made only a few negligible mistakes in this task as well as in baroque chord progression writing

and analysis. Her case was an exceptional example among all the students in both groups, since she was the only student who not only started the course with solid fundamental knowledge and aural skills but also constantly improved to the highest level during the entire year.

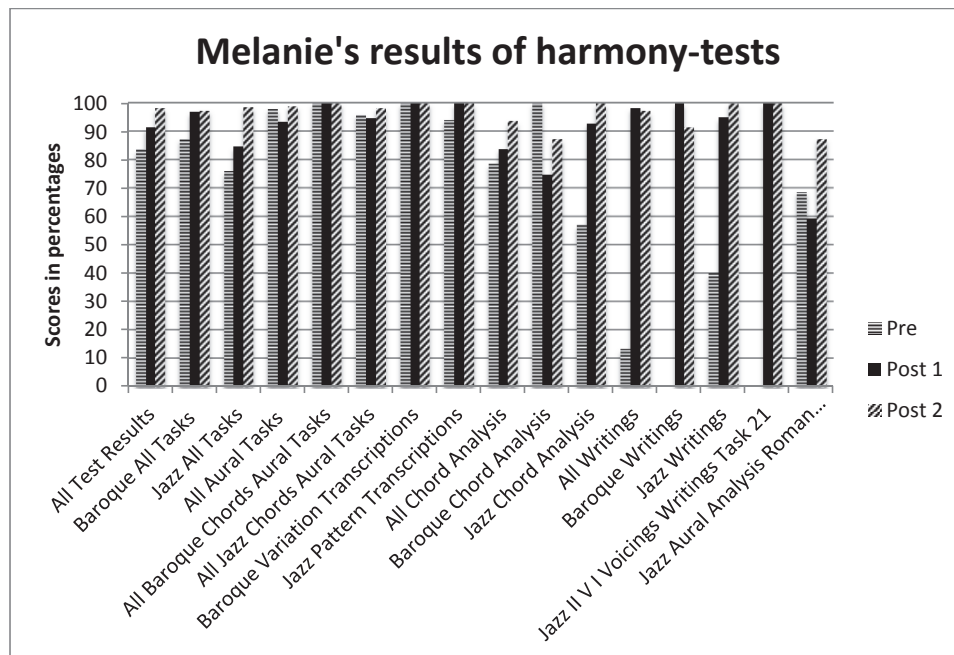


FIGURE 17 Melanie's harmony test results

5.5.2.3 Development of Melanie's improvisation skills

Melanie's results in the improvisation tests are presented in Figure 18. While listening to Melanie's pre improvisation file in baroque, my overall impression was that she had very good piano skills; her one-year formal piano studies gave her certain stylistic knowledge in baroque. Furthermore, she seemed to express her musical ideas with such fluency that I presumed she had extensive informal experiences in piano improvisation. This supposition was confirmed later in her answers to my email questionnaire, where she stated that she regularly played the piano accompanying popular repertoire with other musicians on various informal occasions. She also received two years of formal improvisation studies mainly on the violin as part of her classical training.

As a pre-test task, she improvised an eight-bar-long period form (4 bars as question and 4 bars as answer) in D natural minor, in 4/4 meter, accompanying with the Dm and C chords in every bar. She applied her theoretical knowledge skilfully as she attempted to finish the musical sentence with the full close (perfect cadence). She accidentally played the B flat major chord on the seventh bar

as a subdominant chord before the C major (dominant) and Dm (tonic), and she surprisingly exclaimed "*Ah, sorry!*" Therefore, the arrival on the Dm could not be heard well in the audio files. She seemed to rely on her inner hearing as she made this fine "stylistic" mistake. After finishing the recording, I assured her that it was not a "mistake" but rather showed her functional knowledge. It is important to state at this point that there was no instruction given to the students with regard to the limitation of improvisation to the two chords. The extension of chords to the three main functions in Melanie's improvisation indicated her appropriate functional thinking. She also formulated her melodies with high musicality, improvising fine rhythmical and melody variations as an answer-phase for the four-bar-long question, emphasizing the minor sixth note of the Aeolian mode. The rhythm consisted of crotchets and quavers that were in harmony with the meter, tempo, melody, and form. The evaluators gave similar ratings of very good for all the criteria and rated her awareness of melody phrasing and embellishment excellent. Perhaps, the dynamics could have been more expressive, but the criterion musicality still received very good rates from the evaluators.

Melanie played with the same easiness and excellent musicality as in the pre-improvisation test in baroque, and the evaluators rated all the criteria excellent. She also borrowed many ideas from her baroque improvisation. She improvised in the same eight bar (question-answer) form in 4/4 meter and applied the same chord progression in the same key i.e. D natural minor. She even employed the same idea of extending the cadence with the B flat major as the subdominant chord on the seventh bar. The functional extension at the time sounded as a conscious plan and she succeeded in finishing the musical sentence with the full close by the eight bar. She played many syncopated rhythms that fit well with the chosen medium tempo and style. She was, however, hesitant in finding the right melody on the C chord in the sixth bar as she corrected her first Dorian melody to the Aeolian. The second choice sounded poorer than the first. Despite her stylistic awareness of rhythm and form that was graded very good grade by the evaluators, the applied natural minor in both chord progressions and in the melody sounded strongly influenced by folk or popular music. The evaluators' opinions also seemed to differ on originality and stylistic awareness of melody phrasing and embellishment – the two jazz experts rated these criteria only fair, remarkably lower than the ratings of other two evaluators. Nevertheless, given Melanie's absolute lack of formal jazz piano, jazz improvisation, and jazz theory studies, her first jazz pre-improvisation task appeared to be a promising starting level for the course.

Melanie was keen on joining all kinds of improvisation exercises either with me or with the other students. At the third lesson, she challenged herself to explore the free improvisation on the G major scale on my accompaniment. Because two other students did the same task with me before her attempt, she seemed to be confident enough to take the lead in the improvisation. She combined the motives she heard from other students' improvisations as well as confidently expressed her own original ideas. She appeared to have listened care-

fully to my playing, as she reacted to my changes in terms of dynamics and character of the musical texture.

At the same lesson, after we explored the chord progression of i-v6-iv6-V (Gm, Dm/F, Cm/Eflat, D) based on Pachelbel's chaconne, though various exercises such as listening to recordings and my playing on the piano, singing and playing back the heard bass and melody, and analysing the written score. Melanie was also eager to explore improvising melody variations on the chaconne bass and progression on my accompaniment. She improvised fine variations, building up the melodies from variation to variation, starting with a simple melody and ending with more sophisticated embellishments such as passing notes, neighbour notes, and turns, combined with fine dotted rhythm patterns. She combined various elements of chord figurations that we had learnt from the original variations of Pachelbel with some of those that the other students had played before. This indicated that she had good aural skills and musical memory to copy the musical ideas as well as creative thinking to develop these musical ideas further. These skills could be connected to her extensive classical training such as the six years of solfège studies and playing the violin for more than a decade. Furthermore, she seemed to have applied her theoretical and stylistic knowledge confidently in the improvisation, as she consciously used the leading tone of harmonic minor in the melodies on the dominant chord. She also confirmed my observation: *"I do think so [that piano improvisation is helpful for learning harmony] because one has to concentrate more on (for example) the use of leading tone in melodies and so on"*.

During the next lessons, I observed that Melanie progressed very well while learning all stylistic features of baroque variations, especially by listening to various recordings or analysing the written score, and she could effortlessly apply this knowledge to the improvisation tasks. I also observed on the video from Lesson six that she improved very well her improvisation in terms of rhythmical traits and melody embellishments based on the learnt chaconnes and passacaglias. She was eager to present her ideas playing melody variations on the i-v6-iv6-V, which I also developed further with variations in the position of chords, in voice-leading and figurations in my accompaniment. Even though she wanted to improvise *"only a short variation"*, we ended up playing eight variations as she had more and more ideas. She maintained a very good balance between the rhythmical and melodic variants within each phrase and the preceding or following variations. Altogether, she seemed to have employed all the traits of embellishments we learnt very well. However, the expressivity of musical texture in terms of the use of the register and dynamic sounded more modest in this lesson than in the previous lessons.

During the first five lessons, we overviewed the basic theory mainly, through the baroque material, and also practiced improvising with it. We also connected these elements of music to jazz as we explored the cycle of fifths chord progression through the jazz standard song Autumn Leaves. We practiced the cycle of fifths with seventh chords in various inversions by listening, singing, playing, and transcribing the chord progressions from different start-

ing positions. Furthermore, as we got acquainted with the swing feel, upbeats, and syncopation, we started to practice to play-along the theme and the A part of chord progression (cycle of fifth) from Autumn Leaves with recordings. At the fifth lesson, Melanie attempted to play the chord accompaniment for the first time with the play-along recording and with my walking bass. She played with her right hand trying various positions and leading the voices as we had learnt. She applied the various syncopated patterns we explored very well and she also improvised her own rhythm variations. We played two circles of the A part with the recording, but she did not accurately maintain the pulse, as she was slightly ahead of the drum. I was under the impression that she was too excited to apply all the voice-leading and rhythmical elements we had learnt, so I switched off the recording and we just played together. She became somewhat more relaxed and was more accurate. She played the entire A part twice with repetitions and fine rhythmical variations and voice-leading, and embellished the chords a few times with arpeggios. Considering that this was the first time she played the accompaniment with a play-along recording and that she had not taken the free piano accompaniment course at the University, she seemed to be very skilled in it. This, however, could be explained by the fact that she regularly participated in informal music activities: *"...I do a lot of piano accompaniment at student meetings, ... pop songs both with guitar and piano"*.

Melanie was eager to provide the accompaniment anytime during the course, improvising not only with me but also with other students in duos or trios. She improved a lot during the subsequent lessons keeping up the right tempo especially when playing without the help of play-along recordings. This development could be observed already in the Lesson eight video, when she played again with the recording and with my bass accompaniment, but especially when she played in a trio. Furthermore, she became much more accurate whenever she played the accompaniment, for instance, with Zack who had problems improvising the bass or melody. In these cases, she tried to help the other students by emphasizing the pulse and simplifying the syncopated rhythm variations. This collaborative attitude was also evident at the last lesson as Melanie accompanied the student who had the most trouble improvising the rhythm and melody variations on the theme. In contrast, she seemed to have been motivated to take more risks while exploring her own ideas when paired with more talented students. At the same last lesson she played the accompaniment in a trio with two more skilled students. She made more mistakes as she tried to vary the chord progression such as colouring the chords with secondary dominants, but as all of the students reacted to these moments positively (sometimes they laughed together), these mistakes encouraged her to experiment further. Although her tempo feel seemed to have improved more without play-along with the recording, the novelty of using it as a tool proved to be beneficial to her. This could also be seen in her increased ratings of the usefulness of play-along especially in jazz.

With regard to the development of melody improvisation, Melanie appeared to have been more accurate in keeping the right tempo than in the ac-

companiment. For instance, she improvised fine rhythm and melody variations of the theme of Autumn Leaves at the first occasion, on the sixth lesson.

At the eighth lesson, she did the same individually with the play-along recording, in a duo with my walking bass accompaniment, and in a trio with other students. It could be observed that she played simpler and clearer patterns when playing on my walking bass than alone with the “dry” artificial play-along recording. As compared to playing with me when she was more organised, when playing with other students, she seemed to have played with more ease and fun, but she tried too much and made many mistakes. All of these variants of reactions proved her sensitivity of style, fine musicianship, and excellent musical hearing. She also improved her walking bass accompaniment by the last lesson although this task still seemed to be more challenging than improvising other parts of music. She was more confident in exploring the walking bass with other students during the lessons. Notwithstanding, as it could be observed from the last video, she was still more confident to play only the roots of the chords with various rhythm variations and embellish them with diatonic and chromatic upbeats.

Melanie’s post-improvisation baroque tasks sounded as excellent as her pre-improvisation tasks, and it even improved to a great extent. She successfully applied all of the elements of music that we explored through learning the baroque variations during the improvisation phase. She improvised a four-bar-long theme and three variations (altogether 16 bars) in $\frac{3}{4}$ meter in D harmonic minor, which were sometimes embellished with melodic minor phrases. Also, she extended the Dm-C chord progression with the A as the dominant of D minor on the fourth bar, which resulted in the Dm-C-Dm-A chord progression, i.e. i-VII-i-V in D minor. It reflected the chord progression of Pachelbel’s chaconne, on which we improvised several times during the lessons. She played the four-bar theme and variations with outstanding musicality, building up the dynamical line up to the second variation (bars 9-3), and finally leading it down smoothly over the last four bars. She also expressed the dynamics of the melodic phrases sensitively within the four bars. The rhythm of the melody was simple and consisted mostly of quavers, keeping up the tension as she embellished the chords. First, she resolved the tension at the end of the first variation by playing a crotchet on the last beat of eight bars. Connecting the second variation to the third, she also embellished the melody with melodic minor and semiquaver ornaments, keeping the tension up, which was also stressed on with slight slowing down. Altogether, Melanie’s improvised variations sounded outstanding because she took care of not only the details of the style in terms of melody embellishments and rhythmical traits but also put them in excellent form and expressed them with high sensibility. The ratings of all the evaluators seemed to be in agreement when they assessed Melanie’s performance (she treated the melody and phrases and corresponded them with the dynamics): The musicality and the stylistic awareness of melody phrasing and embellishment were rated outstanding. Altogether, all evaluators assessed this performance the highest,

compared to her other improvisation test tasks, and she received the highest score for baroque improvisations among all students in the Early IG.

Melanie's post-improvisation performance was much clearer than her pre-improvisation performance, where she highlighted some of the stylistic features of jazz learnt during the first part of the course. For instance, she played Dm and CMaj in seventh, resulting in Dm7 and CMaj7, and improvised the melody using mainly the chord notes. The key of the composition was C major and the meter was 4/4. She applied the chord accompaniment technique we had practiced very well, combining it with the melody played with the right hand. She used a two-bar-long syncopated rhythm pattern as a main idea that she developed further for 12 bars. However, at the seventh bar, there was a little confusion in closing the form in the eight-bar-long period. She went further and played only a half-period according to the previous material that resulted in the 12-bar form. She could have completed the form in two eight-bar-long periods. Apart from this hesitation that caused a little problem in finding the pulse and keeping the 4/4 meter for the second half of the musical sentence, the rhythm sounded very good. The melody was embellished moderately in terms of rhythm, using mainly the syncopated rhythm pattern. On the whole, musicality and the two stylistic criteria were rated very good, while originality was rated moderately good. For this improvisation (among all the improvisations in all students), all evaluators rated all the criteria most similarly. Overall, Melanie successfully developed her existing skills of chord accompaniment, improvisation, rhythm, and tempo-feel as well as refine her stylistic knowledge of harmony during such short time.

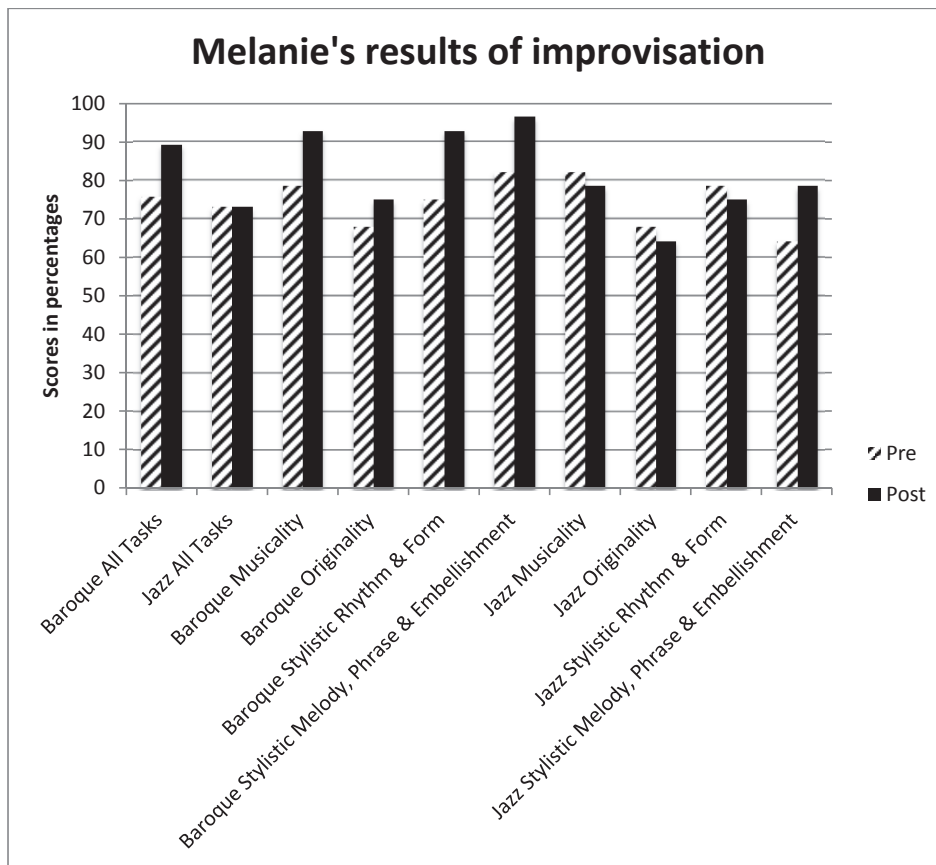


FIGURE 18 Melanie's improvisation tests results

5.5.2.4 Melanie's overall progress and motivation behind learning harmony with and without improvisation

Melanie had extensive knowledge of basic theory and broad stylistic aspects of baroque and classical harmony before the course that could be clearly seen in the pre-harmony test. Her existing knowledge formed a solid basis for improving her jazz harmony knowledge and music theory through either various written and score analysis exercises or practical activities such as recognising accompaniments on the piano or improvising. Therefore, her theoretical and practical performances improved over the improvisation period of the course when piano improvisation was in focus. The stylistic improvisation, in particular, improved in both genres during the improvisation period, as acknowledged by all the evaluators similarly. She also affirmed that piano improvisation was helpful for learning harmony in both styles: "...piano improvisation makes it more concrete and helps one to shift it to her/his own playing... that is what I believe". She also gave concrete examples on how improvisation contributed to the learning process of baroque harmony, for instance: "...because one has to concentrate more on (for ex-

ample) the use of leading tone in melodies and so on". She preferred the peer improvisation activities in both genres, either in duos or trios, over improvising alone, as evidenced by her responses to the questionnaire. Also, it could be observed from the video recordings that she seemed to learn new elements more quickly from peer improvisation activities than from experimenting alone: she was highly efficient in adopting musical ideas while playing with other musicians. This could be attributed to her informal experiences accompanying mostly popular songs with other musicians. Furthermore, she was eager to support and instruct the less experienced students during peer-learning activities in order to bring the musicality of the performance to a higher level.

These performances as well as her pre-harmony test results confirmed that she already had outstanding aural skills at the beginning of the course and she maintained the same excellent standard over the entire course. However, she also stressed on the importance of improvisation as a potentially beneficial tool for developing musical hearing and inner-hearing: "...listening is always helpful, but maybe, playing yourself and improvising helps you to learn what can and what cannot be played in certain parts of a song, and maybe that develops your musical hearing". Nevertheless, Melanie's stylistic knowledge of harmony in both styles developed also during the next phase of the course (without improvisation), evidenced by her post harmony test scores that almost reached the maximum limit. This development and her enthusiasm for completing all kinds of exercises could also be observed during the lessons in the second phase as well as evidenced by her opinion about the usefulness of sing and play, playing-along, and transcription exercises both from the piano and recordings, towards the end of the year. No wonder, she seemed to have trouble deciding which part of the course was more beneficial to her. In the case of baroque, she commented: "Maybe, in the experiment group [improvisation phase]. Voice leading was clearer ... because we had to play ourselves and therefore think about it more". With regard to jazz harmony improvement, she was even more undecided: "It is hard to say. In the control group [second phase of course], I learned a lot of useful theory about jazz/pop chords, but on the other hand, the experiment group [improvisation phase] helped me to learn more about shifting this theory to melody playing. So, maybe, the experiment group [improvisation phase] because it included both parts..."

Overall, it seemed that she was really motivated to learn through improvisation and through other practical activities because she had previously had significantly more formal learning experiences in classical music than in jazz. As a result, she participated in the free piano accompaniment (vapaa säestys) course during the second part of course at the University to further developing her piano accompaniment and improvisation skills. The course also contributed to her changed listening habits as she commented in the email questionnaire: "Lately I've been into jazz: about last year (as well as this year), I listened to old jazz classics, ... and playing some jazz standards. [...] Before university, I listened mostly to pop and rock, less jazz". Furthermore, she also acknowledged the usefulness of learning both baroque and jazz harmony together in the same course: "I think it's useful because you learn the differences and similarities easier than when you study them separately".

5.5.3 Zack (Early IG)

5.5.3.1 Starting level of Zack's knowledge and musical skills

Zack was a second year student in the School of Business and Economics. He was an international student with a very different cultural background from his Finnish counterparts. He learnt Western music, mainly classical piano and classical harmony, only for one year. He received no formal jazz education with piano or music theory and no formal solfège or ear-training in the Western model. Also, he had no improvisation experience in a formal setting and very few experiences in informal settings. In his free, time he usually listened to and played pop music, rarely jazz, and frequently listened to baroque music.

Zack's overall performance in the pre-harmony test was significantly poorer than that of the other students' in terms of both theory and aural skills. Even his basic knowledge in harmony did not seem to be sufficient for the planned course. He also admitted that *"My theoretical background knowledge is relatively low..."*. He entirely left out all writing tasks in both styles and the baroque chord progression analysis by Roman numeral or lead sheet symbols. However, in the basic seventh chord analysis (jazz chords), he wrote a few chord symbols that were absolutely irrelevant to the given chords, so it seemed that he was not sure of the meaning of the chord symbols. Also, he could not recognise or transcribe most of the seventh chords (36% of all the chords). He seemed to be able to identify only the triads in root position (65% from all baroque chords in the aural tasks), but in those tasks, he needed to choose the chords only from the given list. Furthermore, his faulty interval recognitions and the way he tried to transcribe them suggested that he did not know the relationship between intervals and chords. Also, the wrong answers given about the structure of triads and seventh chords indicated that he was guessing the answers most of the times. The only promising result could be seen in the melody transcriptions, especially in jazz. In baroque, unfortunately, he misplaced many phrases and seemed to have been lost in the $\frac{3}{4}$ meter. Meanwhile, in the jazz tasks, in which the simple quaver rhythm probably helped him concentrate more on the notes, the starting phrases (without alterations) were correct, resulting in him obtaining a score of 40%.

As it was mentioned above, Zack came to the course as an international student and had no experience in jazz or in improvisation. Nevertheless, he studied Western classical music and played the piano for a year. Furthermore, he was very interested in learning piano improvisation and develop his musicianship. He also mentioned in the email questionnaire that since the age of 14 years he listened more often to classical and baroque music. Notwithstanding, I was curious about his performance in practical tasks such as improvisation.

5.5.3.2 Increase in Zack's harmony knowledge during the course

Zack's results of the three harmony tests are presented in Figure 19. He made an overall progress of 10 percentage points in the post-harmony test, more in

baroque harmony (around 24%) but much less in jazz (only 7%). Generally, the theoretical tasks were performed better than the pre-test tasks, but he made similar mistakes in recognising the basic harmony such as intervals and triads. Also, he tried to write the baroque chaconne chord progression from the figured bass that we learnt during the course, but there were still too many mistakes in the inversions of triads. In the baroque chord progression analysis, however, he could recognise half of the chords correctly but could not identify any of the basic seventh chords used in jazz from the lead sheet symbols, only a few elements, such as three chords in the seventh family. It seemed that he did not understand the structure of the seventh chords. However, he could write correctly at least three seventh chords from the lead sheet symbols without their extensions, but the complex II-V-I chord progression voice-leading task was left out completely. In the transcriptions, he did not make any particular development in any of the styles but only managed the bass line of chaconne. Unfortunately, the rhythm and meter were also wrong in both transcriptions. I had no doubt about his diligence to grasp the theory and practice tasks given as homework assignments. Also, because I observed slow progress in his aural skills especially with regard to transcriptions during the lessons, I hoped that during the second phase of the course, he would have more time to delve deeply into theory and improve his aural skills. I supposed that, in his case, the improvisation tasks would have not be particularly helpful, but listening to, singing, and playing the chord progressions and the relevant musical excerpts would help develop his general musicianship.

The overall result of the post 2 harmony test did not show any notable development in Zack's understanding of harmony during the second part of the course. However, differences could be seen between the two styles and the theoretical and aural skill developments. Tasks related to baroque style were performed better (by 10 percentage points) than those related to jazz. Also, the chord and chord progression writing and score analysis tasks, especially in baroque, showed a promising 20 percentage points improvement, as opposed to those tasks in which he needed to identify the chords or chord progressions by listening. The melody transcriptions also improved in both styles, in particular, the first two of the three baroque variations, in which both the two-part melody and rhythm were almost perfectly correct. In the jazz pattern transcriptions, there were more incorrect rhythm patterns and misplaced melodies, but he showed an improvement since the post-harmony test. These results were supported by my observations during the lessons in the second phase of course. During the second part of the course, the course material focused on helping students develop stylistic features of harmony in both styles though extended music material in both styles. Therefore, students experienced similar theoretical issues in other opuses that also broadened their knowledge of music literature. Also, there was more time to delve deeply into the melody transcription exercises, something from which Zack benefited enormously. In contrast, his basic theoretical knowledge (such as intervals,

chords, and scales) still showed many weaknesses, especially when he attempted to recognise them by listening.

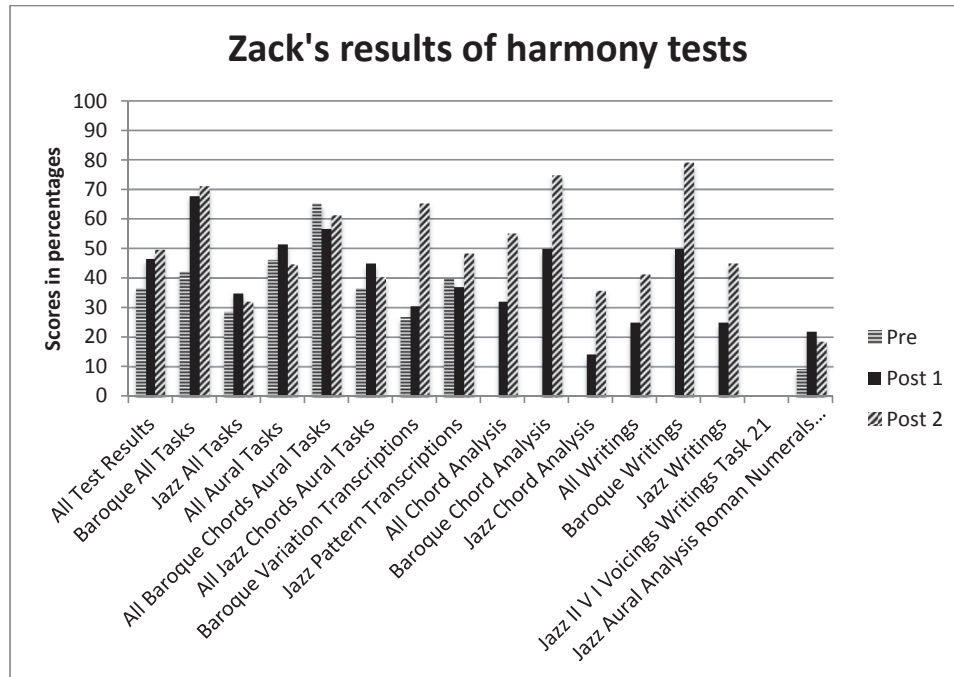


FIGURE 19 Zack's harmony test results

5.5.3.3 Development of Zack's improvisation skills

Zack's results in the improvisation tests are presented in Figure 20. While I was listening to both his baroque and jazz pre-improvisations files on C and Dm chords, I felt that he had fair technical ability to play the piano, but less feel for pulse, meter, and form. Both improvisations were fairly structured and sounded like a kind of a free flow of playing the C and Dm chords randomly. In baroque improvisation, however, Zack tried to play the Alberti bass with the left hand, changing the chords one after the other, something I thought was a good idea. Unfortunately, the endless flow of repeated notes and the lack of any attempt to formulate a meter or a recognisable rhythm pattern negatively affected the musicality and originality. However, the evaluators rated the overall musicality moderately good; all the evaluators seemed to agree about the lack of form, pulse, and rhythmical structure and rated these criteria only fair. The Alberti bass was the only figuration that sounded like a melody, but it was not formulated in any phrase; therefore, it was very difficult to assess the melody phrasing and melody embellishment. Nevertheless, all evaluators seemed to agree that his baroque improvisation sounded slightly better than his jazz one. Regarding the stylistic awareness of rhythm, form, and melody embellishments,

similar problems occurred in the jazz improvisation. Indeed, improvising in this style it was rather challenging for Zack who did not have any background experience with jazz or improvisation.

After evaluating his harmony test and first improvisations and comparing his results with the other students' results, we had a conversation about his existing skills and the aim of my course. He understood that he needed to work very hard and learn the basic theory in order to reach the appropriate level of the course requirement. I assured him that I would provide all the possible help for this. I was curious about which of his skills would improve first and how much he could grasp in music theory in such a short time.

Zack was eager to explore all music materials on the piano during the entire course. Especially during the first improvisation phase of course, he bravely attempted to perform all kinds of improvisation tasks both alone and with me or with the other students. Even at the very first lesson when we extemporised freely on various musical elements such as scales (pentatonic, major, acoustic) and chords (major, minor), he challenged himself to improvise on the pentatonic scale with me. The aim of these very first improvisation tasks was to encourage students to express their ideas freely without limiting themselves to a particular style. Also, I wanted to test their aural and piano skills through a question-answer exercise. I showed Zack short melodies in duple meter, and he copied them and made variations. I emphasized the form and meter since I noticed in the improvisation test that he needed to improve the feel of pulse, meter, and rhythm. Also, in the pre-harmony tests' transcription tasks, I observed that he had problems with the rhythm notation in both triple and duple meter. Zack copied my melodies well, keeping a good pulse and tempo and also played interesting variations while improvising. However, I had to be careful to keep my ideas simple because he was eager to play too much at one time, so he was sometimes running out of the duple meter and extension of form. Nevertheless, this exercise was very beneficial to both of us. On one hand, he experienced the basic idea of improvisation, i.e. listening and copying others' musical ideas and playing variations in a structured frame. Also, because he had never performed such activities before, this first successful performance made him more relaxed and self-confident to play before the other students. On the other hand, I observed that he had a proper feel of pulse, meter, and rhythm and had sufficient technical skills for improvising on the piano; he only needed a systematic practice to consolidate these skills.

At the third lesson, we explored the chord progression $i-v6-iv6-V$ (Gm, Dm/F, Cm/Eflat, D) based on Pachelbel's chaconne through various musical activities. For instance, we played the melody and chord progression together on the piano: I played the accompaniment and the students improvised melody variations with the right hand. Zack also joined in to play with me. He mostly used the pentatonic scale we explored at the previous lesson that did not fit the dominant chord, so, first, I let him listen to the dissonances; then, I explained the role of leading the tone in the dominant chord. I knew that he lacked theoretical knowledge regarding the scales (harmonic minor), but I encouraged him

to explore these by playing the piano. By the eighth lesson, we further explored the chord variants of chaconne, the cycle of fifths the non-harmony notes, and particular melody embellishments through other musical materials, such as Handel's Chaconne in G. Zack's melody improvisation on my chord progression accompaniment (i-v6-iv6-V) showed great improvement. He played the chord progression starting in the same position in which I played but lead the voices differently, resulting in a different melody on the top. He continued with 11 variations; initially, the rhythm sounded uncertain in the triple meter but improved in the following variations. He seemed to practice a lot all of the melody embellishments that we had explored at the previous lessons. Also, he applied not only the harmonic but also the melodic minor quite well in the particular context. Whenever he played something that did not fit well the chord, he immediately attempted to correct himself. His aural skills and stylistic feel definitely improved. Also, I appreciated very much the fact that he did not use the score anymore. Overall, the whole performance was much more organised than the previous improvisations. He appeared to have played with more confidence, and this positively affected the musicality of the performance.

Given the lack of any experience in playing accompaniment and improvising jazz standards as well as the lack of stylistic knowledge in jazz harmony, Zack made significant improvements in all of these skills during the short period of the improvisation phase. Practicing chord progressions both by playing along with recordings and with peers seemed to have been especially beneficial to his tempo, meter, and rhythm feel. From the third lesson onwards, we explored the cycle of fifths with seventh chords in all possible inversions for the standard song Autumn Leaves. Furthermore, we got acquainted with the swing feel, upbeats, and syncopation. At the fifth lesson, the first attempt at playing not only the accompaniment but also playing along with recorded music was challenging for many students, especially for Zack. However, he was eager to try playing the cycle of fifths chord progression with sequential voice-leading on the Autumn Leaves' play-along with the right hand and my walking bass. He played the chord progression, keeping the tempo quite well. Also, he attempted to vary the rhythm with upbeats that improved bar by bar. The swing-feel definitely needed to be improved. However, he seemed to have got lost in form as he made the same mistakes three times at the seventh bar to go on to the beginning of the cycle of fifths. I explained to him what the problem was and helped him hear the root of the chord Gm (tonic chord) by stopping the walking bass on the seventh-eighths bars. Finally, the fourth time, when I switched off the play-along recording, he succeeded in staying with the Gm chord over the seventh-eighths bars.

At the next lesson, when we continued practicing the accompaniments with play-along recordings, we also tried to play the melody of Autumn Leaves. The students were encouraged to improvise with small rhythm variations on the theme. Zack was eager to try this task although this was the very first time he attempted something like this. He also tried to play the theme using the score. It seemed that he could follow better where he is, as he did not need to

pay attention to the voice-leading of the chords but only needed to focus on the melody. He also attempted to vary the melody, but in his case, I thought that it was too early. He needed to practice this a lot since the rhythm and tempo were not as accurate as they were the last time with the chord accompaniment. Perhaps, I could have tried to play with him without the play-along recording to see how accurate he would be in keeping pulse, as I noticed that he played better in the previous lesson. I also observed many times during the course that Zack became much more relaxed and made fewer mistakes when he played either with me or with other students. It is interesting that he was the only student of the nine who did not prefer the play-along tasks in jazz in the improvisation phase of the course. Nevertheless, I did not want to make any assumption of a possible negative effect of these artificial recordings, but I realised that I needed to place more emphasis on group improvisation activities.

By the eighth lesson, we further explored the seventh chords and cycle of fifths chord progressions and II-V-I chord progressions with various extensions and colourations, and the students became more accomplished in playing the accompaniments and the rhythmical traits of swing. At this lesson, the students improvised with me by either playing the accompaniment on my walking bass or improvising melody variations on the cycle of fifths chord progression (A part of Autumn Leaves). Later, the students formulated trios sharing the various parts of music (bass, accompaniment, or melody) between each other. I played the play-along recording for a maximum of two rounds at the beginning and then allowed the students to play by themselves. After several rounds, when most students played most parts of the music, Zack joined in with the melody. He improved very much in expressing the rhythm accurately. He improvised interestingly with original phrases that pleasantly surprised the other students.

Finally, he played the chord accompaniment, which, unlike the melody did not seem to be improving very much since the previous lessons. I asked the students to help him find the chords (since he was continuously misplaying) by playing two-three rounds only in the original melody with simple crotchet rhythm and the roots of the chords on the bass. This helped him very much, and, finally, he dared to make fine rhythm variations on the accompaniment. At the last lesson, the students improvised again in trios and Zack improvised with melody variations on the entire song (Autumn Leaves). While his melody and rhythm variations showed great improvement in his ideas, his rhythm and tempo were again inaccurate.

Zack's post-improvisation performance in the baroque style had shown that it was possible to learn and develop skills in such a short time. While he showed moderate improvement in general in the post harmony test, his improvisation skills had improved in terms of all the assessment criteria. The evaluators, however, rated the improvisations differently and also seemed to have agreed on the fact that he showed general improvement. He was much more organised in terms of structure, melody, and rhythm. The dynamic was much more expressive and musically quite good. Zack improvised in a $\frac{3}{4}$ meter

in D natural minor, changing chords on each bar. The meter was sometimes not perfectly clear because he appeared to have struggled to embellish the chords within the given bar. Thus, the slight stops and hesitations affected the tempo. Nevertheless, he tried to apply all of the figurations and melody embellishments that we had learnt during the course. With regard to the form, he ended up playing 12 bars, which sounded slightly unfinished because he stopped on C major, leaving open the melody on B flat. The feel for form and meter definitely needed to improve.

Zack's performance showed even greater improvement in the post-improvisation jazz tasks, in general, than in the baroque tasks. He played the two chords Dm and C sometimes with seventh in the accompaniment (Dm7 and CMaj). The meter he played was $\frac{3}{4}$, which sounded quite original, compared to what we practiced during the lessons. I supposed that he borrowed the triple meter from the baroque improvisation. The chords were changed one after the other on the subsequent bars. He stopped on the C major chord and improvised on the white keys of the piano resulted in the modal scales D Dorian and C Ionian. The melody, however, consisted of a continuous flow of quavers keeping the melody tense - I liked it very much. He played quite interesting melodies and attempted to embellish the chords. Also, a few times, he improvised with pentatonic phrases that fit well with both chords. However, the four evaluators rated his performance rather differently from the baroque improvisation; his performance was rated good for both stylistic and aesthetic criteria.

Overall, despite the fact that Zack received only one year of classical piano training and had no experience in improvisation before the course, his practical skills improved significantly during the improvisation phase. However, in his case, starting the course without improvisation in order to learn the basics would have been more beneficial to him. Nevertheless, the various play-along and peer improvisation activities helped him apply the learnt elements of music theory in practice and develop his musical hearing and overall musicianship.

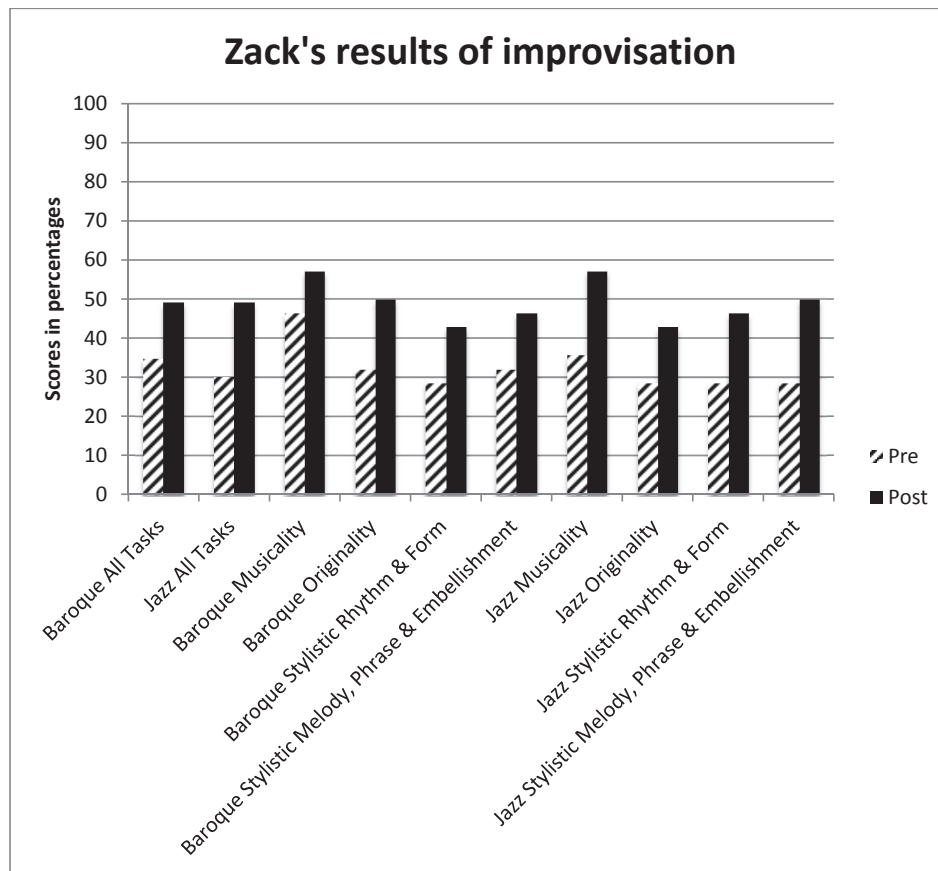


FIGURE 20 Zack's improvisation test results

5.5.3.4 Zack's overall progress and motivation behind learning harmony with and without improvisation

Given his background knowledge and aural skills, Zack progressed quite well during the year. This was seen especially in his performance at various theoretical tasks such as identifying the chords and chord progressions from various chord symbols (score analysis) and writing the chords and chord progressions from Roman numerals of lead sheets symbols; this aspect of his performance improved somewhat equally in both phases of the course, indicating that he could slowly grasp the nomenclature of harmony at a certain level. His moderate classical background definitely fostered the learning progress but it was not enough for understanding the more complex jazz theory. This could be seen in both harmony post-tests, in which the II-V-I voice-leading tasks were omitted and his performance in recognising these chord progressions remained very poor. His overall theoretical and stylistic knowledge and aural skills were poor compared to the other students in the group. His initial scores for various tasks in the harmony tests reflected his previous education. His one-year classical

piano studies definitely supported the improvement of his practical skills especially during the first improvisation phase of the course, for instance, playing chord progressions and improvising melody variations on the given theme and chord progression, which could also be observed in his piano improvisation development in baroque style. He also made the following comment in the FQ: *"... I think [in] the experiment group [improvisation phase] I improved more, because from playing to learning it is easier for me to remember ... also the position of playing"*.

In jazz, however, his development could be seen mostly in terms of rhythm feel and the practical use of harmony. This was also observed during the lessons as well as his post-improvisation jazz performance. It seemed that all those activities that involved the piano in the learning process, such as playing chord progressions or improvising with peers or with the play-along recording, were beneficial to Zack's theoretical understanding and the practical use of harmony. He also felt that he made greater improvement learning harmony in both styles with improvisation: *"My theoretical background knowledge is relatively low. Still, I think [in] the experiment group [improvisation phase], my knowledge of jazz improved more. The experiment group [gave] me more opportunities to practice"*. The similar levels of improvement in various skills between the two genres also indicated that the combination of learning the two styles together was very beneficial to his learning process. He also commented: *"They can merge together. I can easily see ... and learn the key point [of both styles]"*. His opinion about the benefit of improvisation tasks performed both individually and with peers also changed radically by the end of the improvisation phase of the course and was very high by the end of the course. The development of his improvisations and his diligence were observed during the lessons. He attempted to apply all of the elements of music that featured in a particular style, especially the melody embellishment in baroque and the rhythmical traits of jazz. These supported not only his musicality but also his overall musicianship in expressing his ideas in a more organised way. I also observed that the playing along with the recording and improvisation tasks positively affected his musical hearing. Especially, the peer improvisation activities seemed to have motivated him to listen to more carefully to his own and others' musical ideas. He also felt that the piano improvisation was not only helpful for learning harmony but supported his aural skill development. *"Yes. It [improvisation] exerts a positive influence on musical hearing. I personally like this kind of practice very much. My ears had a great training and I have made good progress"*. This was proven by his overall result of the post-harmony test, where he achieved a moderate increase in the scores of the listening tasks in both styles.

Given the lack of solfège or systematic ear training in his previous education, this slow improvement was still remarkable. However, his performance in the transcription tasks developed even further during the second phase of course, so in his case, the development of his inner hearing was not exclusively connected to improvisation. His progress could be attributed to other practical music playing activities, such as singing, playing, playing along with recorded music, and the listening and transcription exercises. He also greatly valued these activities as they compensated for the lack of improvisation in

the second phase of the course. He appeared to have appreciated the playing-along tasks and mentioned in the third questionnaire that he found them very useful.

5.5.4 Harriet (Early IG)

5.5.4.1 Starting level of Harriet's knowledge and musical skills

Harriet was a fourth year student in Music Education, with piano as the main instrument (fifth year studies in languages). Harriet had an overall experience of 20 years in classical piano and of 6 years in jazz piano. She also took the free piano accompaniment (vapaa säestys) course at the advanced level before the course and also had some experience teaching piano before beginning of the course. She also studied classical harmony for six years, solfège for five years, and jazz harmony for one year. Furthermore, she had approximately 15 years' informal experience in piano improvisation mainly individually and occasionally with other musicians mostly in pop and jazz genres. She generally listened to pop music, frequently baroque music and occasionally jazz.

Harriet's theoretical knowledge and aural skills seemed to have been outstanding at the beginning of the course, as she achieved almost the highest possible overall scores: 96%. She perfectly completed the voice-leading writing tasks in both genres: the baroque excerpt from the figured bass and the II-V-I chord progressions with extensions and colourations (100%). She almost perfectly recognised all colourations in II-V-I and cycle of fifths chord progressions by listening. Furthermore, she perfectly solved both baroque variations and jazz pattern transcriptions (100%). These results indicated she had high-level knowledge in music theory in both classical and jazz and excellent aural skills. Also, Harriet was the only student who had attended my previous harmony course that provided data for Study One, and she also commented: "... I was (very) familiar with the topic before starting the course ...". Nevertheless, I was curious to observe which of her skills would improve even further during the current course.

5.5.4.2 Increase in Harriet's harmony knowledge during the course

Harriet maintained her high standards of harmony knowledge and aural skills in both genres, as evidenced by her post-harmony test results (Figure 21). At the beginning of the course, she had achieved very high scores in the pre-harmony test, 96% of the maximum scores that further improved by the end of the improvisation phase. She made a few mistakes in recognising the colourations of the II-V-I chord progressions by listening, but her theoretical and aural skills seemed to have been very stable. It should be noted that the slight decrease in the scores in the II-V-I voice-leading writing task resulted from the few missing bass notes that she probably forgot to write in the score.

By the end of the course, Harriet also perfectly completed the two tasks that were incomplete in the post-harmony test.

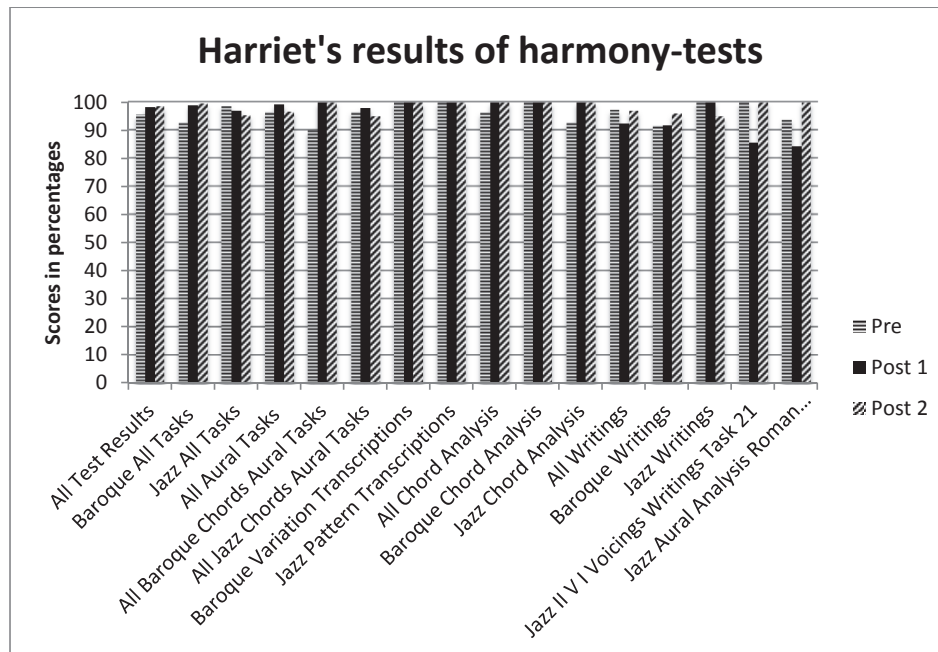


FIGURE 21 Harriet's harmony test results

5.5.4.3 Development of Harriet's improvisation skills

Harriet's improvisation test results are presented in Figure 22. I listened to Harriet's first improvisation recordings, especially in baroque style, with pleasure. She expressed her ideas with outstanding musicality and originality, and also paid attention to the stylistic features of baroque in terms of form, rhythm, and the construction of melody. She improvised an eight-bar-long melody in 4/4 meter in D natural minor. The first two bars behaved as questions by changing the chords of Dm and C on every bar. She also successfully applied the C major on the third beat of the seventh bar in order to finish the musical sentence on the tonic chord on the eighth bar, resulting in a correct form. The rhythm was, however, simple consisting of crotchets and quavers but they sounded in perfect harmony with the chord and melody. Overall, the whole performance sounded like a consciously planned composition. All the evaluators seemed to have had similar opinions regarding Harriet's improvisation, and rated it excellent in all four criteria. Her initial high-level baroque improvisation could be connected to her education and listening habits. She studied classical piano for 20 years, and in the email questionnaire she stated the following: "...At music school, I played quite a lot baroque music on piano as it was part of the curriculum. So, I heard a lot of baroque music. I also listened to it a lot since I like it and I still do if I have the choice". Furthermore, she had also taken the free piano accompaniment (vapaa säestys) course at the advanced level

before the course. This training naturally included many musical genres as well as improvisation activities.

For jazz, Harriet improvised in an 8-bar form and in 4/4 meter similar to the baroque improvisation. It sounded like a lullaby as she expressed the colour of tone with high sensibility. She established the key of the composition in C major and extended the chords with the seventh, changing the chords Dm7 and CMaj7 in every bar accordingly. The fine arpeggios and the different placing of chords with the left hand also enhanced the colourfulness of the improvisation. She also expressed her performance with excellent musicality. At the sixth bar, she slightly hesitated to continue as she closed the melody, making it sound like the end of the composition. Because the form became too short, she decided to continue with another two-bar-long closing motive. The evaluators rated all the criteria very good, but they rated Harriet's ideas quite differently. The jazz piano pedagogue seemed to have been very critical, especially of the originality of the overall sound, whereas the other experts gave Harriet the highest grades. Nevertheless, Harriet had already extensive experience in both improvisation and jazz piano before the course that perfectly corresponded to the level of her performance in the jazz pre-improvisation tests. She studied jazz piano for 6 years and had at least 15 years' experience in improvising in an informal setting, mainly individually and occasionally with other musicians.

Harriet was eager to challenge herself to improvise in both genres either alone or with other students. Also, she already had experience in improvising the current music material, as she participated in the previous course of Study One. Therefore, she was confident enough to demonstrate the different improvisation tasks anytime during the course. For instance, at the first two lessons, we extemporised together on various musical elements such as scales (pentatonic, major, acoustic) and chords (major, minor), encouraging other students to experiment. Harriet and I presented a kind of a musical conversation to the students on the minor pentatonic scale, improvising with questions and answers. Harriet responded to my melodies with fluency and high musicality, so I let her lead the conversation. She seemed to have been very creative in terms of rhythm variations, something that the whole group was impressed by. At the next lesson, another task was to improvise melodies in the G major scale based on my accompaniment. My particular aim was again to formulate a musical conversation. I told the students that any of us could change the context and lead the musical texture to another key. Harriet was again the first to start improvising with me. I challenged her musical hearing with some alterations, such as with the C sharp changing the scale to Lydian, and with F natural that resulted in the acoustic scale. She succeeded in recognising all my alterations and responded to my musical questions very creatively. She also opened musical questions leading the context to the G major pentatonic scale. After Harriet's performance, the other students became very excited to join in and experiment with these elements in duos. At the third lesson, we also explored the melody improvisation on the i-v6-iv6-V (Gm, Dm/F, Cm/Eflat, D) chord progression based on Pachelbel's chaconne. Harriet improvised with six

fine melody variations by embellishing the chord notes similarly to Pachelbel's variations. Her musicianship showed high standards that increased further during the course, motivating the other students to join in and improvise with her in duos or in trios. At the sixth lesson, she improvised with me again on the theme and chord progression of Pachelbel's chaconne (i-v6-iv6-V). Her melodic ideas paid attention to the relationship between the melody and harmony. Harriet also commented how improvisation contributed to the deepening of her stylistic features of baroque harmony: "*... it helps to get familiar with the chord progressions and the fitting scales and notes*". Her attitude and ideas also encouraged me to embellish the bass and chords more freely. Finally, we ended up improvising with the descending chromatic scale, presenting the chord progression of Purcell's passacaglia-aria that was also included in the teaching material at subsequent lessons.

Compared to the other students, Harriet was familiar with most of the teaching material in jazz. From the sixth lesson onwards, we delved deeper into the structure of the cycle of fifths and we explored the II-V-I cadence mainly through the Autumn Leaves and Fly Me to the Moon standards. By the eighth lesson, the students explored the seventh chords with different extensions and colourations. Also, the students became more accomplished in accompanying the standards with or without playing along the recording and in improvising the rhythm and melody variations on the given theme and chord progressions. Harriet showed the development of her skills during the lessons by improvising alone and with her peers. At the eighth lesson, she joined a trio improvising Autumn Leaves. This was the first time when I did not play with them, and they played by heart without using any score. For the first two rounds, I switched on the play-along recording because I thought that it would help them keep the rhythm and accurate tempo. They played the entire song many times and they seemed to listen carefully to each other, especially when I switched off the play-along recording. Harriet provided a stable bass and played more chromatic upbeats to the roots of chords, attempting to play the walking bass patterns. By the end of the performance, she succeeded in playing almost a full walking bass. Next, the students changed the parts between each other and Harriet played the accompaniment. She immediately became the leader in the group as she provided excellent tempo and swing feel and also improvised with fine variations and syncopations. When she improvising the melody, she appeared to have run out of original ideas. She helped the other students for whom the accompaniment was challenging by simplifying or varying the syncopations in the melodies. Therefore, Harriet played the simple theme of Autumn Leaves a few times to maintain the good tempo of the group. On the last day of the lesson when they played Autumn Leaves again in trios, she could finally exhibit her original ideas and accomplishment. At that time, she improvised the melody with two other students who were at a much higher level in terms of improvisation and had more piano skills than the students with whom she had played the last time. In the video recording of this lesson, Harriet seemed to have been more creative

with melody embellishment and rhythm variation than at the previous lessons. Overall, she improved her musicianship and improvisation skills over such a short time.

Harriet's post-improvisation baroque melody sounded as excellent as the first one. She improvised two periods A and B in 4/4 meter. The A period was 6 bars long and consisted of 4 bars as questions and 2 bars as answers in the melody, whereas the second B part had the 4-4 bar structure. She combined D-minor pentatonic and natural minor scales, making the melody sound like a folk song. The melody was constructed consciously in relation to the form. She built the dynamics up to the sixth/seventh bar of the B period. The musicality and awareness of various stylistic traits of the whole improvisation were excellent, and given similar ratings by all the evaluators.

Harriet's post-improvisation jazz melody sounded more matured than her previous improvisations. The performance showed outstanding musicality as she led the melody lines confidently and extended the registers with both hands. She improvised in the 3/4 meter with swing rhythm in C major using the chords Dm7 and CMaj7 in various positions and figurations. The chords were changed in every bar starting with the Dm7, but from the seventh bar, she swapped the order and improvised each chord with two bars. The form, therefore, sounded freer than in the baroque improvisation and it enhanced the originality of the performance. She excellently embellished the melodies with the right hand and improvised with the figurations of chords with the left hand. She also improvised with fine variations in rhythm. The evaluators rated this performance the highest of her all improvisations test tasks as well as the highest of all students' jazz improvisations in the Early IG. Altogether, despite the fact that she had excellent piano skills and experiences in improvisation, her jazz improvisation, especially the two stylistic criteria, improved further during such a short training.

Interestingly, at the beginning of the course she did not highly value baroque improvisation either individually or with peers, in contrast to jazz, where she rated both activities as very useful. She had approximately 15 years of informal experiences improvising on the piano, but mostly individually and mainly in jazz. Jazz improvisation, however, was part of her five-year formal jazz piano training. She emphasized that she generally listened to and played pop music in her spare time. Nevertheless, her opinion about the benefit of individual or peer improvisation in baroque changed notably by the end of the improvisation phase.

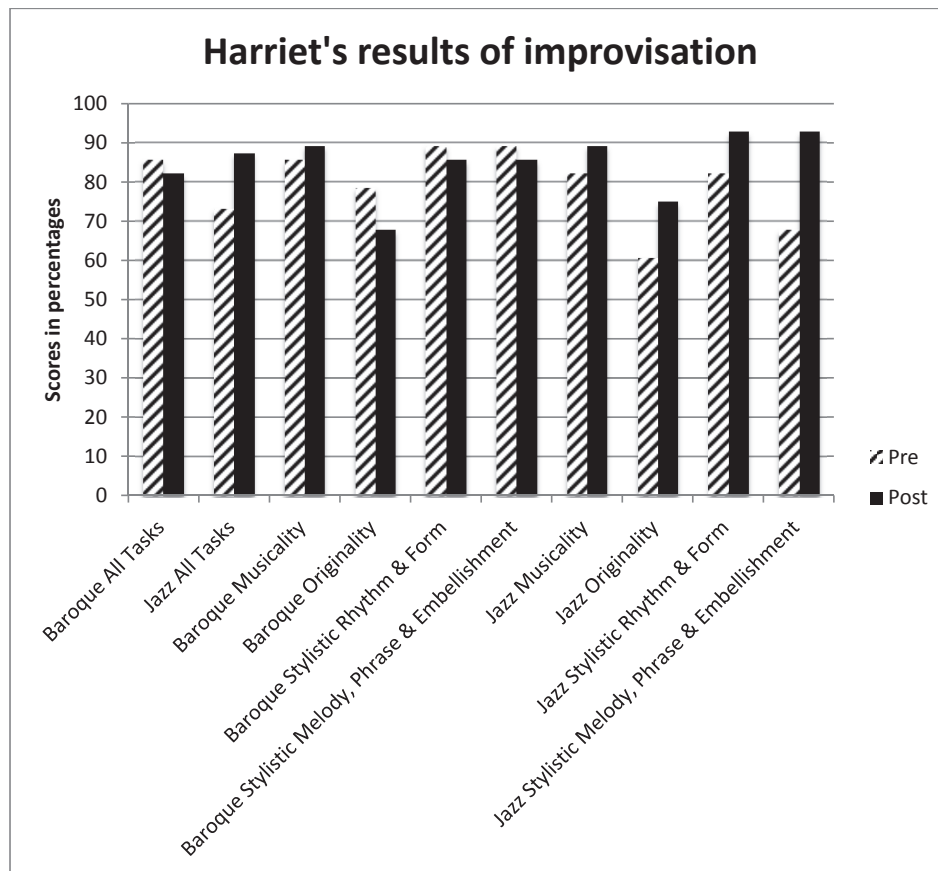


FIGURE 22 Harriet's improvisation test results

5.5.4.4 Harriet's overall progress and motivation behind learning harmony with and without improvisation

Harriet had extensive knowledge in both baroque and jazz harmony and excellent aural skills at the beginning the course, and her performance was at the highest level over the entire year. This could be seen in all three harmony tests, in which she succeeded in keeping her scores almost to the maximum. The current course seemed to have been a kind of a routine for her to keep her knowledge fresh. Therefore, she found hard to specify which part of the course enhanced her knowledge more. She made the following comment in the FQ: *"For me, the most useful exercise on this was listening to the [music] on the net and figuring out the bass lines. This was combined with playing on the piano..."* Hence, she rated the exercises involving transcriptions from recordings and playing along with recorded music in baroque, as beneficial exercises by the end of the first part of the course.

With regard to her learning progress in jazz harmony, she also benefited from the second phase of the course since different listening exercises were in-

cluded in both parts of the course. *“The most useful tasks for me were...[when] we were supposed to listen to the chords played on the piano and if I remember correctly, we did that in both groups [parts of course] but maybe more in the control group [second phase of course]?”* Indeed, the improvisation took a significant amount of time as compared to the other activities during the improvisation phase that was compensated for by focusing on other practical and aural tasks such as listening and transcription exercises in the non-improvisation phase. Because she was quite familiar with the material in both styles and most of the exercises included in the course, *“the improvisation tasks were more like kind of eye-openers”*, as mentioned in her response in the FQ. Nevertheless, improvisation was like a practical tool that helped deepen her music theory: *“... they helped notice how many possibilities there are and that I should explore the world of scales better in order to be able to use them fluently while improvising ... it [piano improvisation] helps to get familiar with the chord progressions and the fitting scales and notes”*.

She also felt that piano improvisation was beneficial to her aural skills: *“...I think especially for the inner hearing. That is how [with improvisation] you can test whether you hear ‘good things’ in your head”*.

Nevertheless, she also valued the other practical exercises such as playing along or singing and playing with the piano in both parts of the course, so her focus on aural skill training as well as her progress in learning harmony was not influenced solely by the improvisation activities.

5.5.5 Pamela (Late IG)

5.5.5.1 Starting level of Pamela’s knowledge and musical skills

Pamela was a third year student in Education, Class Teacher Program. Also, parallel with the current course, she started piano pedagogical (special) studies. Pamela’s main instrument was the piano that she learnt for 12 years in classical style but she also studied jazz for 1 year. Her extensive classical training included three years of classical harmony and four years of solfège training, but she also studied jazz harmony for two years. She remarked that she did not have *“too much”* improvisation experience before the course, but she must have had at least a one year formal experience of it during the free piano accompaniment (vapaa säestys) advance course and during her jazz piano studies. Also, she emphasized that she had moderate informal experiences in piano improvisation either alone or with peers, slightly more in jazz and individually than in peer situations or in the baroque genre. She explained her informal playing habits in the email questionnaire: *“Out of school ... I often play spiritual music (gospel, Christian hymns/songs that stylistically belong to pop/folk genres)”*. In contrast, she played baroque frequently, *“mostly Bach”*, only during her piano studies in her adolescence. Nevertheless, she added that she generally listened to jazz, although since adolescence, the frequency of listening to it *“had varied a lot”*.

Overall, it could be seen from the pre-harmony test that Pamela had extensive basic as well as sufficient style-specific knowledge of harmony. Her overall total scores were at 70% of the maximum, for both genres. She per-

formed well in recognising the basic chords including triads (baroque chords) and seventh chords (jazz chords) and made only few mistakes with the inversions, especially the seventh chords. In contrast, it seemed that she had more problems transcribing the chords correctly. Nevertheless, her initial scores of 84% in baroque and 77% in jazz chord recognition tasks were promising. Also, she seemed to have known how to identify the various chords and chord progressions from the written chord symbols either from Roman numerals or from the lead sheet symbols. She achieved excellent scores of 90% in both baroque excerpt analysis and jazz seventh chord analysis even with particular colourations and extensions, and this achievement could be attributed to her previous education. In contrast, she seemed to lack certain style-specific writing skills that could be seen in the voice-leading writing tasks in both styles. She entirely omitted the task of baroque chord progression voice-leading from the figured bass and had trouble completing the II-V-I chord progressions. It seemed that she did not know how to space the chords in the right position and lead the voices correctly, but she seemed to know the seventh chords even with the extensions, as she put them in the score from the root position. Nevertheless, in the other writing task, in which she had to write individual jazz chords from lead sheet symbols, she performed very well.

Overall, these diverse results in writing tasks indicated that she had solid basic theoretical knowledge in terms of jazz chords and she only needed to learn various techniques in order to use this knowledge widely. Similarly, she recognised the degrees of II-V-I chord progressions through listening, but she did not mark the quality of the chords or the colourations. It seemed that she had overall sufficient aural skills but the transcription technique needed to improve, indicated by her moderate performance in melody transcriptions in baroque (62%) and jazz (23%). Her baroque variations showed that she could correctly transcribe the simplest scale-like melodies, whereas in jazz, despite her good knowledge of chords, she had problems writing down the chord figurations. Overall, Pamela's starting level of knowledge was sufficient for learning stylistic features of both baroque and jazz harmony in such a combined course.

5.5.5.2 Increase in Pamela's harmony knowledge during the course

The results that Pamela achieved in the three harmony tests are presented in Figure 23. Pamela improved her overall knowledge of harmony by 17 percentage points during the first phase of course, i.e. from 70% to 87% of the total scores. Her performance in the baroque harmony tasks improved to the maximum, while in the case of jazz, her progress in the stylistic features was rather slow. Her basic harmony knowledge and aural skills were remarkable high, as evidenced by the fact that she recognised and transcribed all the triads perfectly (100%) and the seventh chords almost perfectly (96%). Similarly, slight differences could be seen in her progress in the chord and chord progression analysis tasks using Roman numerals and jazz lead sheet symbols between both the genres. At the pre-test, however, the result for the analysis task was already

very high in baroque, at the post-test she managed it 100%. In the jazz tasks, she made very few mistakes related to the extensions or colourations of the seventh chords. Nevertheless, she seemed to have learnt most of these colourations as she managed to write almost all jazz chords with these extensions correctly. She also mastered the voicing technique that she did not know at the beginning of the course: she solved the baroque figured-bass voice-leading task perfectly (100%). Unfortunately, she completely left out the similar voice-leading tasks in jazz, but she knew the chords of the II-V-I chord progressions at the pre-test. She also confirmed her challenges during the first part of the course: *"...In the beginning, everything was new and we got to know all the basics ... for example the II-V-I system as a part of the cycle of fifth..."*.

She seemed to have improved her aural skills significantly in the short duration of the course. I observed during the lessons that she was eager to challenge her musical hearing with various sing and play, play-along, listening, and transcription exercises. As a result, a 20 percentage points improvement was seen in her melody transcriptions in both styles. In baroque, she managed to perfectly complete two variations of three, achieving 80% of the total scores. In jazz, she made mistakes in chromatic notes and rhythm as well as misplaced a few patterns. Altogether, she seemed to have understood the whole structure and form of the patterns since she could transcribe the frame of melody for both genres, i.e. the beginning and the end of both melodies, correctly. Altogether, Pamela's understanding of the stylistic traits of harmony improved as did her aural skills during the first phase of course with the help of various practical exercises. She seemed to have achieved solid theoretical knowledge in order to delve deeply into the style-specific piano improvisation tasks in both baroque and jazz genres.

Pamela managed to achieve a score of 90% in the post-harmony tests for both genres. However, the scores of the first post-harmony test at the end of the first non-improvisation phase were already high, and her final harmony test performance showed her comprehensive development in all kinds of tasks: recognising and transcribing the elements of music by listening or from the score and working them out in writing. However, in most chord recognition tasks involving listening and melody transcriptions, she accurately identified the chords from the written score. Also, she completed the jazz II-V-I chord progression voice-leading tasks perfectly. Her melody transcriptions improved remarkably and reached the 96% of total scores in baroque, and 77% of total scores in jazz. In the jazz pattern transcriptions, she only misplaced a part of the second pattern, and she almost perfectly transcribed all the melodies even with chromatic notes. She seemed to have developed this technique gradually during the course, but her development could be attributed to her enthusiasm for exploring the stylistic traits of the melodies and not just the improvisations during the improvisation phase: She made the following comment in the FQ: *"I seemed to be more interested in melodies than harmonies"*.

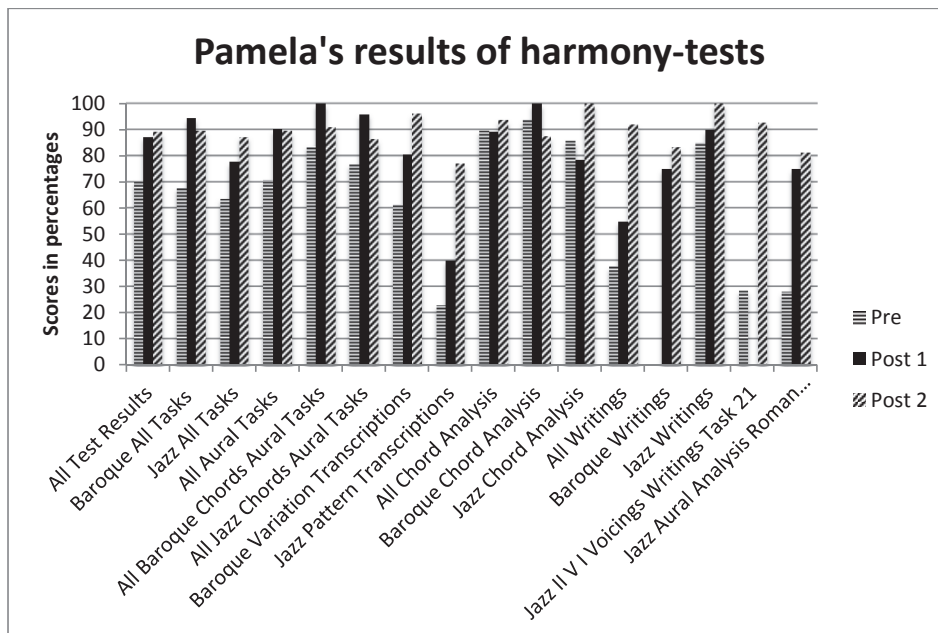


FIGURE 23 Pamela's harmony test results

5.5.5.3 Development of Pamela's improvisation skills

The results of Pamela's improvisation tests are presented in Figures 24 A (peer improvisation) and B (individual improvisation). In the pre-improvisation tests, the quality of Pamela's improvisation performances in the baroque style showed extreme differences between the peer and individual improvisation tasks. In the peer tasks, Pamela fairly succeeded in improvising the melody on my chord accompaniment. Her beginning ideas and solutions sounded moderately good, whereas the subsequent melodies were poorer. She improvised four motives on the 4-bar-long chord progression (i-V-VI-V in D minor in 3/4 meter), yielding altogether 16 bars. Her first theme sounded fine and quite original, emphasizing the chord notes on the first beats of the bars. The rhythmical solutions also sounded well structured, with quavers in the first ascending phrase that smoothly descended with the chaconne rhythm pattern using quavers and minim on the VI chord. However, she did not continue this pattern on the V bar. Instead, she started the ascending part of the theme again, confusing the rest of the melody. This shift continued on the second and third chaconne patterns, so altogether, it sounded weird. She desperately tried to correct this continuous shift of melody patterns on the chord progression and finally found the starting point of the theme again on the 13th bar. Her last pattern sounded quite similar to the main theme. Altogether these shifts of patterns negatively affected the musicality of the performance as well as the fluency of melody, which were rated fair. However, the originality and the rhythmical solutions were rated

slightly higher, the reasons of these overall lower scores were due to the two baroque expert pedagogues assessments.

In contrast, in her individual improvisation tasks, Pamela was found to have outstanding piano skills and musicality. She seemed to have very original ideas combined with excellent stylistic awareness of rhythm, form, melody phrasing, and embellishment, and all the evaluators seemed to have rated her performance similarly. She improvised a theme and two variations on the *chaccone* pattern in 6/8 meter, yielding altogether 12 bars. The main theme was based on arpeggios of the chords in the lower register shared between both hands and combined with an independent melody. This was smoothly developed further with a more separated musical texture in the first variation, in which the melody waded in higher registers played by the right hand, while the chord accompaniment with chord figurations was played by the left hand. The melody perfectly fit the chord progression. The embellishment of melodies was also outstanding consisting of fine repetitions enhancing the tensions of suspensions on the given chord. The most musical and original moment was when she embellished the B flat major chord with G sharp in the melody, resulting in the Augmented 65 chord (German 6). This musicality was rated outstanding by three evaluators, the highest rating of all of Pamela's improvisations in baroque and among all the students of the group. She seemed to have been very creative in applying the learnt stylistic features of harmony and the related melody embellishments in the improvisation, which we already explored through various baroque variations during the first half of the course. The simple eight notes combined with fine dotted patterns also sounded very fluent. Pamela's fine individual improvisation definitely could be attributed to her excellent piano skills acquired during the 12 years of her classical piano studies, the free piano accompaniment advance studies, and also the piano pedagogy specialisation during the first phase of the course. After this performance, I was curious to see if she would progress in improvising with other musicians in the forthcoming improvisation part of the course.

In the jazz style, Pamela succeeded equally in both individual and peer pre-improvisation tasks. With regard to the peer task, her melody improvisations on my II-V-I chord accompaniment in swing were carefully structured. The entire performance reflected easiness and high musicality. She improvised 3 four-bar long melodies resulting in 16 bars altogether with my intro. The first two melodies were similar to each other, in which the second was a variation of the first theme, whereas the third one was a different closing motive. The idea of theme was based on a suspended single note A that was the first chord note on Dm7 that turned to the ninth of G7, and finally resolved to note G on CMaj7. This melody could have been borrowed from the II-V-I chord voice-leading realisations with the ninths that we explored and practiced during first phase of course; therefore, I assumed she could successfully apply many elements from the learnt music theory. This simple melody was also embellished with repetitions and short phrases played with fine syncopations and triplets in rhythm. For the last closing motive, she improvised an ascending scale-like melody over

the Dm7 and G7 chords that resolved on C with a fine rhythmical embellishment. There was also a balance between the different melodies and the applied rhythmical elements and form. This performance was rated good by all the four evaluators who rated all the criteria similarly. Altogether, the whole composition at the start of the improvisation phase of the course was very promising.

Pamela's individual performance at the pre-improvisation tasks on II-V-I chord progression also convinced me that she was a very creative and talented pianist with a high level of musicianship. She improvised three variations on the chord pattern in 4/4 in swing feel and a closing motive with more rubato. The theme was based on the root of the chord Dm7 that was embellished with turns and syncopations in rhythm. She improved this idea further in the next patterns. Also, she played chord arpeggios and fine scale-like melodies with a triplet rhythm connecting the tonic chord to the next pattern. The closing motive sounded very "classical" and original in terms of the melody and voice-leading of the dominant seventh to the tonic chord. Altogether, her performance was rated good against all the criteria. Altogether, Pamela's first jazz improvisations sounded absolutely fine given her one-year formal jazz piano training background. However, in informal settings, she often played other popular genres; her background combined with various listening and play-along exercises and her theoretical development during the first phase of the course seemed to have positively affected her overall musicianship and stylistic improvisations.

The development of Pamela's improvisation and other practical skills during the course showed steady progress and was highly illustrative of the relevance of motivational aspects, as she demonstrated an exceptional improvement in stylistic awareness. From the very beginning of the improvisation phase, Pamela was enthusiastic about improvising either with me or with other students. In her improvisations, she was able to apply all the theoretical elements that we explored through the various baroque materials at the beginning of the course. This achievement was also supported by her good aural and piano skills as well as her creative and experimenting personality. During the first two lessons, we learnt new chord progressions through Pachelbel's Canon. We delved deeply into particular features of baroque harmony using figured bass and Roman numerals both by listening and analysing the score. For instance, we sang and played back the voices in the polyphonic texture and identified the passing notes, suspensions, and other melody embellishments related to the given chord progression. The students also played the theme and chord progression of Pachelbel's Canon along with the recording, both with and without the score.

At the third lesson, we started to improvise on this material in pairs. We focused on the stylistic traits of the Canon, but I also let the students explore a kind of "free-style" improvisation. Pamela quickly grasped the material and improvised fine variations on the melody skilfully when applying Pachelbel's embellishments. She also played the chord progression in different positions and tried to lead the voices correctly. The voice-leading technique that seemed

to have been her weak point in theoretical knowledge at the beginning of the course improved gradually. The first significant step forward was her performance of figured bass voice-leading task in the post-harmony test. I observed from the improvisations that she became acquainted with this technique and she heard well whenever she had made a mistake, but being a passionate musician with an experimenting personality, she always wanted to create something new. She also admitted in the FQ: *"I am a bad student when it comes to learning theory by doing. When we played, I seemed to be more interested in melodies than harmonies"*. This could be observed at the third lesson when she improvised accompaniments of two students' melodies in "free-style", based on Pachelbel's Chaconne. At first, she played with Samantha who had comparatively low piano skills, so Pamela patiently played the chord progression first at a slower tempo. She altered the bass of the Canon to the descending scale of D major, resulting in a I-V6-vi-iii6-IV-I6-ii7-V7 chord progression. Pamela's accompaniment was full of chord figurations and sounded very original. Secondly, she played with Kathleen who had more experience playing the piano but had trouble improvising. Pamela seemed very supportive and played an intro for Kathleen who wanted to listen to it first. Pamela again proved her excellent aural skills and musical memory as she borrowed the previous student's idea of chord figurations. However, after many variations, when her peers became more confident improvising melodies, she seemed to have been even more creative in developing the improvisation with her own ideas. She also seemed to make a very fine "mistake" of turning back the bass line after chord VI resulting in a iii64 that surprised both of them, as it sounded very nice on Kathleen's melody. Pamela also encouraged Kathleen to smoothly bring up the dynamic of music at the middle of the variation and resolve down at the end. Also, her subsequent variations had subtle differences in the dynamics and character.

From the fifth lesson, we learnt new material such as Handel's Sarabande in D minor and explored the features of bass variations connected to the jazz walking bass. For comparison, we learnt the theme and chord progression of the Spanish Foglia and explored particular ornamentations in the melody by Lully and Marin Marais by listening, singing, and playing the piano as well as from the written score. At the sixth lesson, we started to improvise on the Foglia variations. All the students played the chord progressions i-V-i-VII III VII I V at various positions, while I showed them ideas to improvise the melody variations; I accompanied them and they improvised the melody. Pamela played the accompaniment with excellent musicality and dynamics and she was eager to play the chords with fine figurations. She only made a mistake in the cadence at the end of the second variation, as she wanted to repeat the line again. She quickly understood the problem and corrected the cadence. With regard to the melody, she applied a few ornaments such as mordents and trills. She also embellished the melody with fine dotted rhythm patterns and triplets at the closing phrase. She was eager to create a new texture according to her own original melodies that also sounded stylistically appropriate.

Pamela's ability to easily incorporate new theoretical material into her improvisation patterns was also illustrated within the context of Jazz materials. During the first five lessons, while practicing the baroque material, we delved deeper into the extensions and colourations of the cycle of fifths chord progressions mostly with the jazz standard song *Fly Me to the Moon*. We also explored the components of the cycle of fifths, i.e. the two II-V-I chord progressions in major and minor keys. We listened to recordings and compared those to the lead sheet as well as played and sang and transcribed the chord progressions at various positions and spacings. Finally, we practiced by playing along the chord progression and theme of the song with the recordings and score. At the sixth lesson, we started to improvise melodies on the cycle of fifths chord progression in different keys, positions, spacings, and colourations in pairs. Students also attempted to play the walking bass lines, some of them did so for the first time. Pamela was also eager to improvise the walking bass on Kathleen's chord progression accompaniment. Pamela first played some scratched ideas from the score but later she tried to play her own ideas that sounded quite good as compared to her first try. They changed the parts of music and Pamela accompanied the chords with very good syncopations in the rhythm but she did not maintain the tempo. She kept playing the chords with the regular voice-leading techniques we had learnt. In the video of Lesson eight, a great improvement could be observed in Pamela's chord accompaniment in terms of colourations and voice-leading. Her rhythmical ideas were very good and she kept the tempo. However, she made the greatest improvement in her jazz walking bass since the sixth lesson. She improvised the walking bass in two trios with other students on the II-V-I chord progression in the major key. At first, she became too ambitious and tried too many rhythmical variations instead of varying the melodic line. After I showed her some patterns, she managed playing simpler but melodically more correct bass lines. Later in this lesson, in the other trio, she started to experiment again with difficult lines but kept a better tempo. She asked me for some more ideas for the walking bass that she could practise; I showed her some, but she hurried again. Her main problem was that she tried too much at once, trying both scale-like walking and rhythmic note repetitions. Then, she started to explore simpler melodies and gradually improved to keeping the tempo and playing continuously without stopping. She was also experimenting all possible melody variations in the walking bass and applied chromatic notes. She also listened carefully to the other students' accompaniment and melody improvisation.

Pamela was enthusiastic to improvise the melodies on II-V-I in trios. As at the previous lesson we got acquainted with the *Take the A Train* jazz standard and analysed the II-V-I chord progressions of the song, she borrowed many motives from that theme. She improvised with fine melody variations and embellished the melody with chromatic notes. She also improved in rhythmical phrasing in swing.

At the last lesson, Pamela improvised all parts of *Take the A Train* such as the walking bass, chord accompaniment, and melody with Larry and me. She

developed the melody with good rhythmical phrasing and kept the proper tempo. She also seemed to have recognised all kinds of complex jazz chords we learnt and played with much ease in various positions as well as embellished these in the accompaniment. She also showed progress in playing the walking bass, but she had problems keeping the tempo. I observed during the improvisation phase that she generally had more problems keeping the tempo whenever she played a simpler rhythm. Nevertheless, she improvised with many fine variations on the walking bass using more chromatic notes. Finally, she improvised the melodies in a call-and-response manner with Larry to my II-V-I accompaniment. Pamela played excellent melodies with a high sense of style. The patterns sounded unique and were full of chromatic slides, turns, chord figurations. She also borrowed ideas from Larry that she further developed. It seemed that her level of musicianship, improvisation, and piano skill matched very well with Larry's. They seemed to have impressed and motivated each other very much with their ideas. Finally, I challenged them by slowing down the tempo and accompanying them in rubato. Pamela expressed herself with excellent melody embellishments, arpeggiated patterns, and with various rhythmical solutions such as scale-like patterns and triplets. They also tried out very short melodies in a call-and-response manner. They created an excellent musical conversation.

While listening to Pamela's post-improvisation baroque tasks, I felt that she had succeeded in improving her stylistic knowledge in baroque improvisation. In the peer improvisation tasks, when improvising a melody on my i-V-VI-V chord progression accompaniment, she applied various elements such as figurations, chord and melody embellishments, and certain ornaments that we had learnt during the sessions. She improvised a theme with an ascending step-wise melody with a fine trill. She gradually embellished this idea over the next two variations, applying many more figurations and ornaments. She also expressed her melody with excellent musicality as she always did during the entire course. The evaluators rated her performance excellent against all the criteria, with the only exception being her stylistic awareness of rhythm and form that was rated good. Perhaps, the form could have been solved in a better way if she had played another variation to finish the musical texture.

In her individual improvisation task, Pamela borrowed her theme from the peer improvisation tasks and developed it further over the subsequent three variations. In contrast to the melody in the post-improvisation test on my accompaniment, she completed the form by simplifying the last variations in terms of embellishment, muting down the dynamics, and slowing down the tempo. The four variations sounded like 2 eight-bar-long periods as she used the first melody with a slight alteration in the third variation. She was especially creative in the last variation as she closed the melody perfectly with a finishing phrase on the dominant chord on the last bar. Despite her critical remark, "*...not always did my melodies show harmony so well*", the evaluators appreciated her original ideas and rated them outstanding against all the criteria. Pamela's stylistic sense seemed to have improved. Overall, all the evaluators rated her

performance excellent or outstanding against all the criteria. She proved her excellent musicality and creativity, expressing her musical ideas at high standard.

While listening to Pamela's melody in the post-improvisation group tasks in jazz on my II-V-I accompaniment with the walking bass, I recalled many of her ideas from the last melody improvisation exercises at the last lesson, when she played with Larry in a call-and-response manner. It seemed that she applied all the concepts we had explored during the improvisation phase in the improvisation. She improvised three variations. Each of them sounded different starting with a very short repetitive melody that gradually grew with leaps and various chord figurations and were embellished with slides and other ornaments. The rhythmical ideas and the fine stresses also sounded excellent, but they were not accurate. The entire improvisation was a kind of a summary of all the studied basic elements of jazz improvisation on II-V-I as well as a demonstration of her most preferred musical ideas. Pamela's melody improvisation with peer accompaniment had improved very much as well as received very good ratings from the evaluators in all the criteria.

In her individual jazz post-improvisation tasks, Pamela again demonstrated her outstanding musicality and creativity, applying the ballad style for her individual improvisation on II-V-I. The free rubato without constraints of the pulse allowed her to express her technical skills as well as the sense of fine melody embellishments. Altogether, she improvised three variations but the form was not perfectly clear as she slightly hesitated in a finishing phrase at the second variation. She bravely used the registers and combined the melody motives with both hands. The dynamics sounded very smooth and were expressed with care especially within the variations. Overall, Pamela's improvisation was rated good but the stylistic awareness of rhythm and form in this task received a lower rating than in her pre-improvisation test, perhaps because of her hesitation in constructing the form of improvisation rather than the rubato performance.

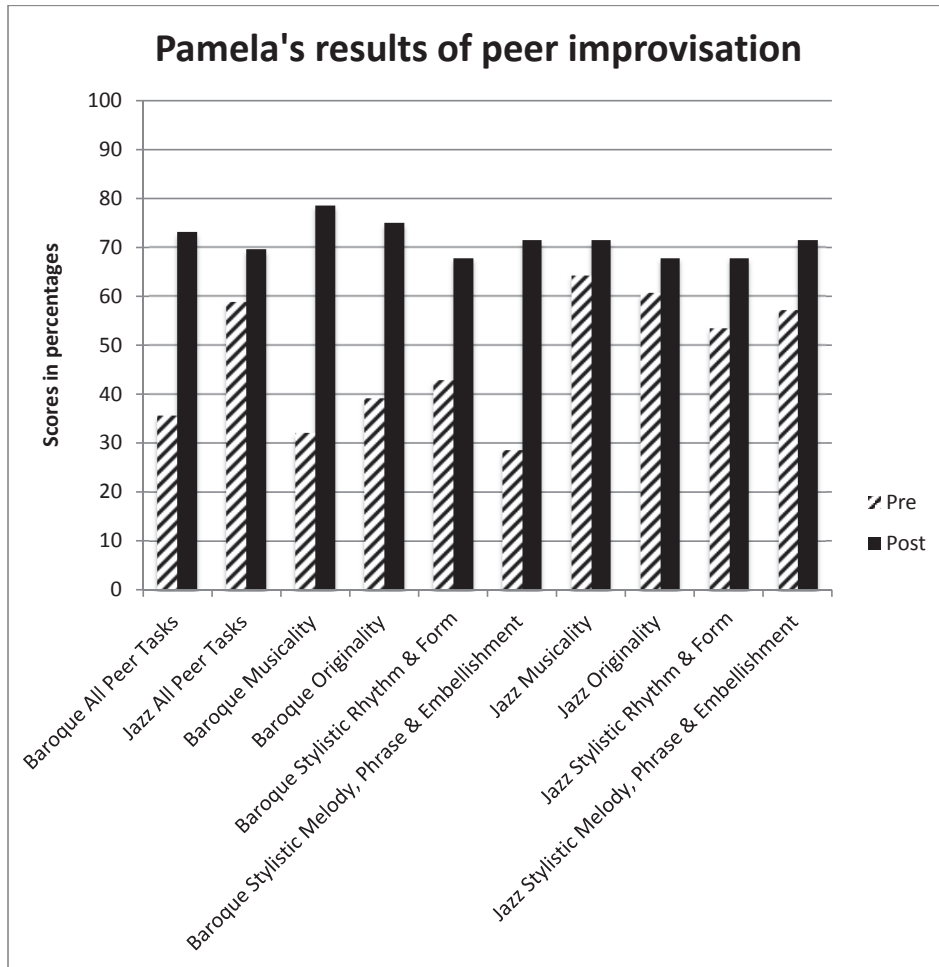


FIGURE 24A Pamela's peer improvisation test results

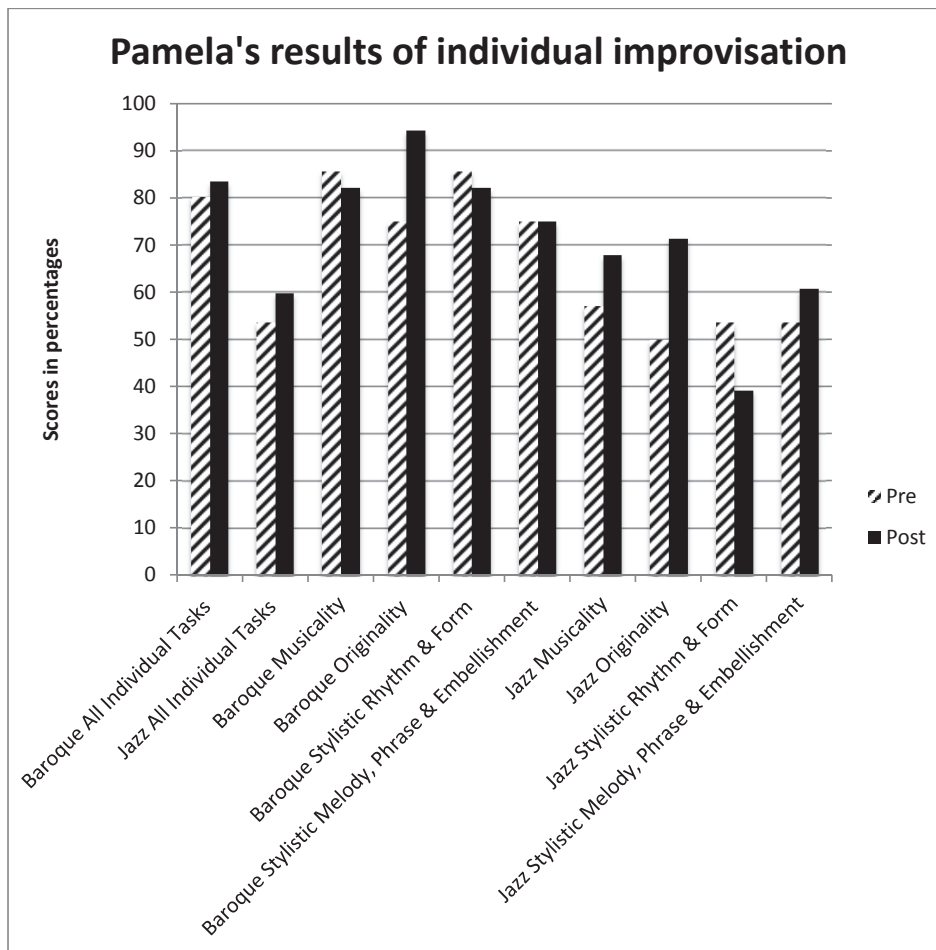


FIGURE 24B Pamela's individual improvisation test results

5.5.5.4 Pamela's overall progress and motivation behind learning harmony with and without improvisation

Pamela's overall improvement in both music theory and practical skills gradually increased over the year to a remarkably high level. She already had extensive knowledge in basic theory in both styles owing to her previous music education. All of these aspects created a solid ground for deepening her understanding of the stylistic features of music in both genres. Her basic theory knowledge, for instance, grasping nomenclature and the voice-leading technique, was found to be well established during the first half of the course. Therefore, she was hesitant in judging which part of the course helped improve her knowledge more. With regard to baroque, she stated the following in the FQ: *"Really hard to say. I would say in Experiment Group [Improvisation phase]."*

But ... also ... my knowledge generally grew through the year". With regard to jazz she stated the following: "I would say that in the Control Group [First phase of course]. Because in the beginning everything was new and we got to know all the basics for example the II- V- I system as a part of cycle of fifths".

Similarly, her chords and melody transcriptions were found to be well developed during the first half of the course even when we had not started improvising during the lessons. Therefore, Pamela had a strong opinion about the effect of piano improvisation on her aural skills: *"Yes [the improvisation is helpful]. But, when you play, you have to think of the harmonies then. Not just let the fingers go without thinking. For me, it is difficult to combine active listening and thinking ... playing the piano at the same time. In that sense, I think singing the chords is a better way to learn harmonies and improve inner-hearing".* This remark is supported by her high rating of the usefulness of sing and play, play-along, and transcription exercises that altogether positively affected her aural skill development. Her overall stylistic knowledge and practical skill development supported the high starting level and progress of improvisation skills in both genres. She valued improvisation as a highly beneficial tool for grasping theoretical knowledge and applying it in practice, especially individually: *"...of course the harmonies are nice to be heard (rather) than just to see them as numbers/symbols".* However, from the video observations, it seemed that she had more confidence expressing her musicality and original ideas alone than with peers, especially at the beginning of the improvisation phase. These observations could be connected to her extensive classical piano experience as well as a moderate level of experience with peer improvisation in the formal and informal settings.

Nevertheless, her peer improvisation skills developed significantly during the lessons as did her appreciation of these exercises, leading to improved ratings in her post-improvisation tests. In her case, the improvement in melody transcriptions and the outstanding development in improvising with a fine style and in presenting original melodies either individually or with peers showed some connection. She explained: *"...When we played, I seemed to be more interested in melodies than harmonies".* Overall, it seemed that improvisation helped improve her overall musicianship. She also enjoyed learning both styles in the same course but she highly valued those activities during the course that were connected to aural training.

5.5.6 Jodie (Late IG)

5.5.6.1 Starting level of Jodie's knowledge and musical skills

Jodie was a first year student in Music Education. Jodie's main instrument was the accordion that she had learnt for 20 years. She studied a range of styles from classical to pop, but her principal focus was folk music. Surprisingly, she remarked in the first questionnaire that she had not had any formal classical piano training and that she had participated in the free piano accompaniment (vapaa säestys) course as a compulsory subject during her class teacher studies before attending the university. However, the curriculum of such a piano

course mostly focused on the basic technique of accompanying songs in various genres (such as folk, dance, popular songs, etc.) and classical material, to some extent; therefore, she has had to play classical music during the free piano accompaniment course. She learnt jazz piano for two years and had sufficient formal experiences in piano improvisation in jazz as well as in other popular styles during the free piano accompaniment course. Nevertheless, she had 15 years' experience in improvising folk music and various popular styles in the informal setting on the accordion both alone and with other musicians. Jodie also listened to jazz more often than classical or baroque music, notwithstanding she emphasized that she "... usually listened and played (out of school) popular music and folk-music". With regard to music theory, she remarked in the first questionnaire that she neither learnt classical nor jazz harmony. Nevertheless, she had aural skills training while learning solfège for three years.

The pre-harmony test results showed that Jodie had good basic theoretical knowledge and sufficient style-specific knowledge of harmony. Overall, she achieved a score of 67%, with moderately higher scores in baroque (73%) than in jazz (56%); however, on looking closer at the content of each task, the difference was not found to be very sharp. She correctly recognised and transcribed most of the basic stock of chords such as triads and seventh chords by listening, achieving a score of 80%. She could perfectly (100%) identify all the chords of the baroque chord progression by Roman numerals, whereas she seemed to have had more problems in the same task performed using lead sheet symbols and was able to identify only half of the seventh chords used in jazz. However, she could identify and work out many of these jazz chords even the various extensions both from the written score, and vice versa, working out the chords from the lead sheet symbols into the score. These results showed her good theoretical knowledge in jazz. In contrast, she did not seem to know how to write the chords from the figured bass as she could figure out only half of the chords and write them into the score, and she had problems with the voice-leading tasks. These results could be attributed to her jazz piano studies as well as her extensive experience in playing the accordion, mainly using lead sheet symbols. Similarly, in the II-V-I chord progression voice-leading writing tasks, she figured out mostly the chords with the seventh note, but most of the positions were not correct. It seemed that she could use her good basic knowledge of harmony in both tasks to certain extent but she needed to develop her voice-leading technique. In addition, although she knew how to analyse the baroque chord progression with Roman numerals, she could not identify the II-V-I and cycle of fifths chord progressions by listening.

Overall, these results reflected the fact that she did not have any formal music theory training either in the classical or jazz style. Nevertheless, she seemed to have excellent aural skills, evidenced by the accuracy of her performance in the baroque melody transcription tasks. In addition, although she had misplaced many parts in the jazz pattern transcriptions, she seemed to have recognised where the melodies ended, as her closing phrases were correct. These results also showed that she had a good standard of musical hearing and

high level of musicianship, owing to her extensive solfège training and practice in playing and improvising with the accordion both individually and with a band. Overall, the starting level of Jodie's knowledge and musical skills seemed to have been a good basis for deepening her understanding of the stylistic features of both baroque and jazz harmony in such a combined course.

5.5.6.2 Increase in Jodie' harmony knowledge during the course

The results of Jodie's three harmony tests are presented in Figure 25. Jodie showed 21 percentage points improvement in her overall scores, achieving a score of 85% of the total scores. The scores improved similarly in both genres, reaching 93% in baroque and 82% in jazz; however, the baroque pre-harmony test scores were already much higher than those in jazz.

She recognised and transcribed almost all of the triads (93%) correctly through listening and achieved a much better score in the task involving the seventh chords (85%) than the other tasks. She showed excellent progress in identifying the seventh chords with extensions in the written score through the lead sheet chord symbols. In the baroque chord progression Roman numeral analysis task she achieved a score of 93%. In the chord and chord progression writing tasks, she showed great improvements. She wrote all seventh chords with extensions perfectly in the score using the lead sheet symbols. Similarly, she could write the chords of the baroque chaconne chord progression from the figured bass, but her voice-leading was still not perfectly correct (83%). In contrast, she could perfectly write the II-V-I chord progressions with proper voice-leading. This result also confirmed that she successfully learnt all the chords with extensions that we explored during jazz lessons.

Another notable improvement could be found in the aural recognition of II-V-I and cycle of fifths chord progressions through Roman numerals, where apart from the recognition of the sevenths and ninths, the recognition of chord degrees as well as most of the qualities of the chords was correct. Since she seemed to have had excellent aural skills already at the beginning of the course and was already familiar with the Roman numeral system, this progress could be attributed to the improvement of her understanding of the relationship between the theory of music and the real music context as well as of hearing the harmony within the musical context. With regard to the melody transcriptions, she had the same outstanding result in baroque and showed remarkable improvement in jazz. She almost perfectly transcribed the first shorter jazz pattern and misplaced fewer parts in the second melody, achieving a score of 50%. Jodie had extensive experience in improvisation and showed her good piano skills and musicianship during the first phase of the course (without improvisation) in the various practical music activities. She also found singing and playing exercises and playing along with recorded music and score especially beneficial. Therefore, the improvement in her theoretical knowledge and practical skills created a solid foundation for performing the stylistic improvisations in the subsequent improvisation part of course.

Jodie’s overall score in the post 2-test was 6 percentage points lower than that in the post 1-test; she achieved a score of 82% of the total. This result indicated that she could not develop her overall knowledge further to a notable extent during the second improvisation part of the course. For instance, she made the same few mistakes that she made in pre-harmony test tasks in relation to the aural recognition and transcription of triads and seventh chords as well as the identification of extensions and additional notes in the seventh chords from the written score using lead sheet symbols. The melody transcriptions had more mistakes than in the post 1-test and similar patterns were misplaced again in the jazz melody transcriptions. This finding indicated that she needed more time to learn and hear the relationship between the II-V-I and the improvised melody. In contrast, her voice-leading technique from the figured bass showed an improvement. She also wrote the II-V-I chord progressions with the seventh chords and extensions better than in the post 1-test and made good progress in identifying the extensions of the seventh chords in the II-V-I and cycle of fifths chord progressions by listening. Despite of the fact that her overall result did not show any improvement since the end of first part of the course, this achievement together with the success of working out the chord progressions with proper voice-leading indicated that the various practical exercises such as comping and improvising both alone and with peers successfully consolidated her theoretical knowledge during the improvisation part.

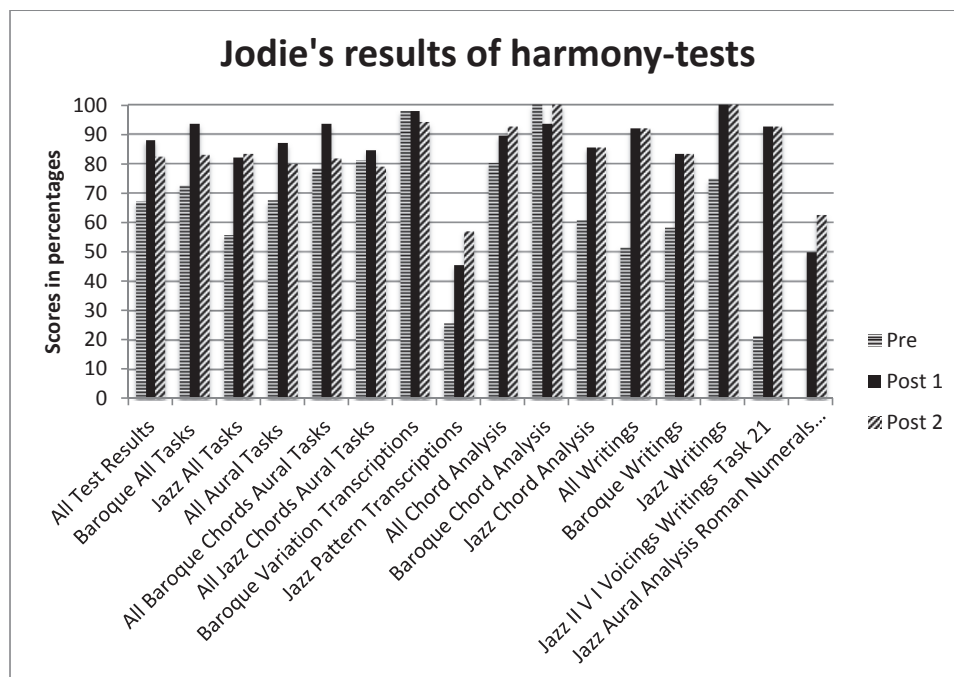


FIGURE 25 Jodie’s harmony tests results

5.5.6.3 Development of Jodie's improvisation skills

Jodie's improvisation test results are presented in Figures 26 A and B. Jodie's first melody improvisation on my i-V-VI-V chord progression accompaniment sounded good. She could express her ideas with good musicality. The theme melody sounded simple but fit the chord progression that she developed over the three variations. The first variation ascended the melody line by an octave in the melodic minor scale. This was followed by another variation using the harmonic minor scale, in which the leaps such as those leading the tone to note C did not sound well with the V chord. Finally, she led the melody downwards in the last variation arriving to the starting octave register and ending on the leading note. The originality of ideas was assessed very differently by the evaluators, outstanding by one of the baroque expert evaluators and moderately good by the other three experts. She also used a few embellishments from those we learnt through the baroque variations during the first phase of the course; one of them was a turn combined with upper and lower neighbour notes on the top of the melody that sounded fine. Interestingly, the evaluators had very different opinions about her stylistic awareness of melody phrasing and embellishment. The two extreme ratings were outstanding and fair. With regard to the rhythmical solutions, she mostly used quaver motions combined with a dotted rhythm pattern that generally sounded fine and fit the given chord progression and melody. Nevertheless, the stylistic awareness of rhythm and form were rated lower than the melody phrasing and embellishment. Altogether, all the criteria were rated moderately good and Jodie's first melody improvisation performance was a good start for deepening her understanding of stylistic improvisations in the improvisation phase.

Jodie's individual improvisation had proven that she had excellent musicality and general piano skills. Overall, it seemed that she was much more confident improvising alone than with my accompaniment. She improvised a theme and three variations in 3/4 meter. The entire improvisation was carefully built up in terms of the melody line, starting with a chord figuration in quaver motion as a theme. The first variation was a simple scale like-like melody with crochets followed by various chord figurations similar to the theme. The second variation also consisted of fine chord figurations and led the melody to an octave higher. She mainly played the roots of the chords in octave with the left hand emphasizing the chaconne rhythm pattern that sounded fine with the right hand chord figurations. The last variation consisted mostly of dotted rhythm patterns and repetitions of the notes. She slowed and muted down in the whole piece by arpeggiating the chord notes with crotchets over an octave that resulted in a one-bar extension in the form. Overall, the entire performance sounded very fine. The two stylistic criteria were rated good by all the evaluators, but the melody embellishment received diverse ratings. After this performance, I was curious about how she would improve her improvisation skills either individually or with peers.

Jodie's first improvisation on my II-V-I accompaniment sounded good. She improvised much simpler melodies with fewer notes than in the baroque

improvisations. These short melodies were mostly used in the chord notes with few upbeats and syncopations that sounded not as interesting and colourful as the chord figurations in the baroque improvisation. She seemed to have had fewer original ideas for developing her theme further. Only the last variation was embellished with few slides. Her performance showed her hesitation in terms of continuing the melody after the second variation but she corrected those phases that did not fit too well with the chord accompaniment. Nevertheless, after a few bars, the rhythm was swinging nicely and sounded much more accurate. The four evaluators rated all the criteria quite similarly, where the originality and melody ideas received moderately good rates, whereas the musicality and stylistic awareness of rhythm and form received slightly higher ratings.

When I listened to Jodie's first individual jazz improvisation on II-V-I, I found that she could express her ideas better in jazz without my accompaniment. Her individual jazz improvisation performance sounded much more musical and livelier than her performance with her peers. Although she had extensive experience playing and improvising on the accordion with other musicians and alone, piano she seemed to have been more confident playing by herself on the piano. She improvised a theme and three variations in medium tempo in swing. She played with ease and without any hesitation in her individual performance as opposed to her performance with her peers. She kept a good tempo and accurate rhythm and phrasing and played very colourful melody embellishments such as slides, chord arpeggios, or turns combined with seventh chord figurations. However, she slightly over stressed the triplet motion of the swing that resulted in a dotted rhythm, sounding like a staccato. She also played too many slides. Her performance reminded me very much of dance or folk music on the accordion. In addition, she confidently and consciously accompanied the melodies with the fifths and roots of the chords, so, overall, it sounded very much like a folk music accompaniment. Her ideas seemed very original. Nevertheless, she played with excellent musicality and the whole performance showed her fine piano and improvisation skills. Most of the evaluators had similar opinions about the stylistic and musicality criteria, rating them very good, whereas originality received a slightly lower rating. The early music expert evaluator seemed to have been very critical especially in assessing the melody phrasing and embellishments only fair. Nevertheless, the post 1 harmony test performance also showed that Jodie seemed to have prepared herself for deeply understanding the stylistic features of jazz harmony.

From the very beginning of the improvisation phase, Jodie was eager to join in improvising either with me or other students during the lessons. She also made the following comment: *"It's more interesting and fun to study by playing anything ..."*. She was able to apply all the theoretical elements in the improvisations we explored with the various baroque materials. For instance, she was enthusiastic about playing the voices of the various baroque variations, figuring out the passing notes, suspensions, and other melody embellishments, playing along with recorded music or improvising Pachelbel's Canon and the Foglia

variations. At the third lesson, we started to improvise on Pachelbel's Canon in pairs, paying attention to the stylistic features of the original opus and improvising freely on the theme and chord progression. Jodie was paired with Larry and she led the improvisation, confidently providing her own version in the accompaniment. She challenged Larry with her intro at a faster tempo. She played the intro in swing and slightly varied the bass, resulting in the following chord progression: I-V-VI-III-IV-I/V-IV-V. It seemed that Larry could cope with Jodie's lively and pop music comping style; therefore, she continued to challenge him by changing the bass to a descending scale, resulting in the following chord progression: I-V6-VI-III6-IV-I6-IV-V. Jodie also employed chromatic notes in the bass that sounded similar to the jazz walking bass. She seemed to be very skilled in accompanying since she had experiences in this activity with bands on the accordion.

At the fifth lesson, we learnt with new materials such as Handel's Sarabande in D minor and we also explored the features of bass variations connected to the jazz walking bass. In addition, we explored the theme and particular ornamentations in the melody variations of the Spanish Foglia. At the sixth lesson, we started to improvise the Foglia variations. Similar to the other students, Jodie also played the chord progressions $i-V-i-VII III VII I V$ in various positions, while I improvised the melody variations. She varied the bass line in the accompaniment and ensured proper voice-leading with the right hand. We followed the original structure of the Foglia, so after repeating the eight-bar theme, she should have included the dominant chord at the third beat of the seventh bar in order to close the piece with the tonic chord on the eighth bar. We stopped and I explained the problem. We played another variation that she perfectly closed at the end with the proper cadence. We also changed the parts and I accompanied her melody variations. Her theme sounded very original and was reminiscent of the original theme of the Foglia. She developed the theme by taking the melody to higher registers. She improvised three variations with fine melody embellishments such as trills and turns with chromatic notes. Jodie seemed to have listened carefully to my accompaniment and played her musical ideas with a high musicality. She made further progress in stylistic improvisation during the subsequent lessons of the improvisation phase.

Jodie made substantial progress in learning the stylistic features of jazz harmony through the various practical approaches, in both accompanying and improvising a melody or walking bass line. During the first five lessons, parallel with the baroque material, we delved deeply into the extensions and colourations of the cycle of fifths chord progression through listening, singing and playing, and playing along the song Fly Me to the Moon with recorded music. We also explored the II-V-I chord progressions in various positions and spacings and transcribed various melody patterns based on the II-V-I progression. Because Jodie had excellent skills in providing the accompaniment, it seemed that the transcription and improvisation exercises especially with peers, were particularly useful in reinforcing her musicianship and stylistic sense. At the sixth lesson, we started to improvise melodies on the cycle of fifths chord pro-

gression in different keys, positions, spacings, and colourations in pairs. Jodie was eager to provide the accompaniment, while Samantha attempted to play the walking bass. Jodie seemed to have been very collaborative and patient because Samantha was less skilled in playing the piano and had many technical problems. Jodie first played the chord sequence with different spacings, mixing the positions of the chords, as she was always confident comping freely. However, when she paid more attention to the voice-leading and started the chord progression from other positions, Samantha could better hear the roots of the chords from the chord sequence and became much more confident in finding the bass notes of the chords and trying out some walking bass figures. Jodie also attempted to improvise walking bass lines at the same lesson on my accompaniment. First, she checked a few clichés from the score we had learnt, and in the next three variations she improvised using her own ideas. She played many ascending walking bass lines with full chromatic scales that did not always sound very fine. Nevertheless, she eagerly attempted to correct these misplayed patterns. Finally, I helped her by showing her some other solutions such as combining the scale-like melodies with certain chord notes. We improvised two other variations that sounded excellent. Since she had excellent musicianship, aural skills, and practice with playing in bands, she quickly grasped the new information and could implement it into practice.

During the subsequent lessons, Jodie took advantage of the many opportunities for improving her improvisation skills either by providing accompaniment or improvising melodies with other students or individually. At the eighth lesson, she joined in two trios for improvising all parts of the music on the II-V-I chord progression in the major key. First, she improvised the melody with Larry's accompaniment and my walking bass. Because at the previous lesson we got acquainted with the *Take the A Train* jazz standard and analysed its II-V-I chord progressions, Jodie played the relevant part of the original melody and later she improvised it. She improvised with many fine melody variations, embellishing the melody mostly with chromatic notes. She also tried to vary the chord figurations and combined them with short melodies, as per my suggestion. She improved the rhythmical phrasing of the melodies as well as the swing feel. It seemed that as soon as she was grouped with those students who had more stylistic knowledge and experiences in jazz she started to forget the clichés such as the slides that she had used to play on the accordion. For instance, Larry played the chord accompaniment with excellent swing rhythm, arpeggiating the chords with fine syncopations that immediately affected Jodie's melody playing. Her swing sounded much better without those sharp accents that made the triplet sound like a dotted rhythm.

In contrast, whenever she became the "leader of the group" providing the accompaniment, the whole sound became different and the swing, a little bit sharp. This could be observed in the video of the eighth lesson, when Samantha played the melody and Pamela, the walking bass. Samantha was at the beginner level of playing the piano and Pamela was busy figuring out the steady beat with a walking bass, so she could not influence the swing feel. Nevertheless,

Jodie's playing showed her excellent musicality and perfect time feel whilst keeping the pulse steady. In addition, she showed her creativity by playing very fine variations combined with chord breaks and syncopated rhythm patterns. She slightly overemphasized the slides, but she confidently changed the registers and positions of the chords that made the whole performance very lively and colourful.

She showed substantial progress in improvising the walking bass line that could be seen another trio performance. Jodie played with Samantha's accompaniment and Kathleen's melody. However, the task involving improvising with the II-V-I still was challenging for the other two students, while Jodie played excellent variations on the walking bass, applying all the solutions that we learned and explored. She also kept the steady pulse, supporting the other students' playing.

Jodie's post-improvisation baroque tasks sounded much more matured and clear in terms of stylistic traits of melody than the pre-improvisation tasks. She successfully applied many of the rhythmical traits and melody embellishments we had explored during the improvisation phase. She expressed her ideas with very good musicality and developed the melodies by taking care of the colour of the tone and dynamics. She improvised three fine variations with fine figurations, chord, and melody embellishments and certain ornaments on my i-V-VI-V chord progression accompaniment. However, the fourth full variation was missing, and it did not affect the form negatively because she closed the whole musical sentence with a short melody on the tonic. She also used the registers bravely, bringing the melody up on the third variation. Altogether, all the variations perfectly fit the chords and sounded quite original. Overall, all the evaluators rated both the aesthetic criteria very good and both stylistic criteria good.

Jodie's individual post-improvisation i-V-VI-V chord progression also developed very much since the beginning of the improvisation phase. However, similar to the pre-improvisation tasks, it seemed that she could improvise more freely and confidently alone. She improvised a theme and two variations carefully, building the melody lines over two octaves. The theme started with quavers and crotchets that she developed with fine chord figurations mostly with quaver motion. She led the melody down by one octave in the second variation. In the third variation, she brought the melody back to the original register. These register changes enhanced the musicality of the improvisation. She accompanied the melody with the roots of the octave chords or fifth figurations, the basic structure of the jazz walking bass line explored at the lessons. Because she kept applying this figuration on the chaconne pattern, the variation did not sound perfect in all parts of the music. For instance, the melody jumped from note E of the A chord (dominant) to the Bflat (VI chord) sounding like a triton leap. Nevertheless, she confidently applied various melody embellishments and ornaments such as turns and trills that we had learnt. The evaluators rated her performance very good against all the criteria. Jodie's performance has shown

that she could polish her stylistic sense and the existing musicality to a high standard during the improvisation phase.

Jodie's post-improvisation melody on my II-V-I accompaniment sounded lively, colourful, and original. She seemed to have developed her stylistic feel to a high level during such a short improvisation phase. The theme and three melody variations sounded musical and consciously constructed in terms of melody and rhythm. Jodie's theme consisted of a fine chord figuration and syncopated rhythm ending with a slide on the tonic chord. She developed this melody as the first variation outlining the Dm chord in a different position. The closing melody of this variation was based on short syncopated phrases arpeggiating the CMaj7 chord that sounded as an answer for the theme. The second variation was based on a different idea going up to the higher register that finally dropped with short syncopated sequences. The last variation closed the whole musical sentence with a syncopated CMaj7 chord. A few of the syncopations did not sound perfectly accurate, but the whole performance sounded very fine. The evaluators' ratings ranged from good to outstanding, and the ratings for each criterion were similar.

Jodie's individual jazz improvisation showed the high standard of her musicianship and musicality. She played a theme and three variations in medium swing expressively using chord figurations and arpeggios with both hands over many registers. However, she used the same rhythm pattern of the theme in the subsequent variations that slightly negatively affected the originality of the performance. She also slightly overused the sustaining pedal. The originality of the performance was rated good. Nevertheless, the colourfulness of expression and wide range of melody embellishments resulted in a fine composition. The musicality and both stylistic criteria were rated very good by the evaluators.

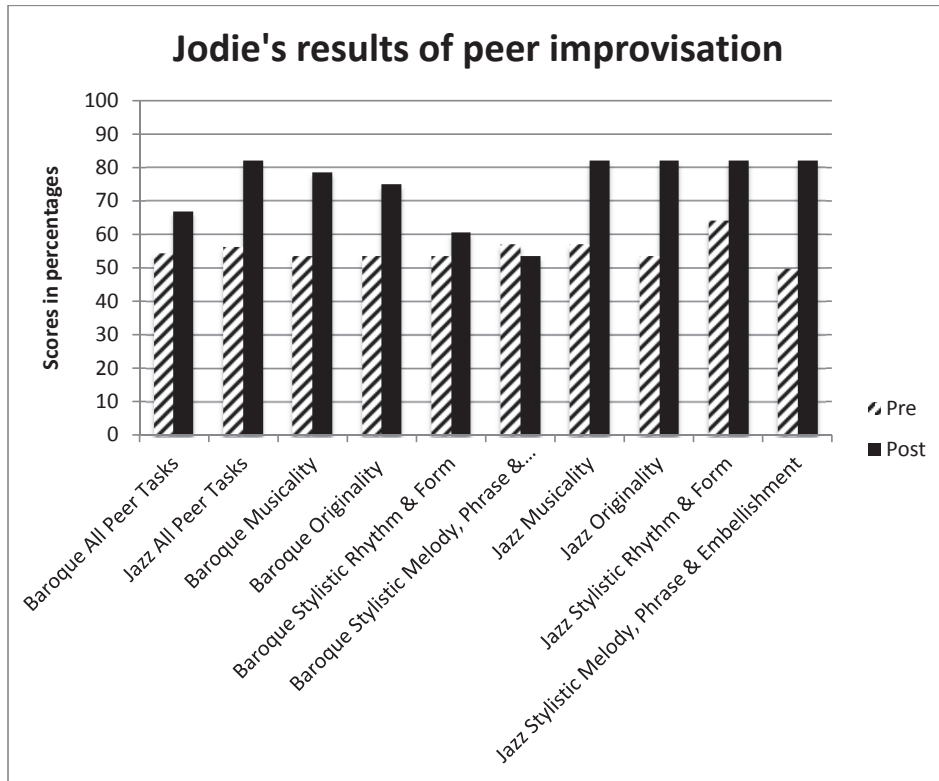


FIGURE 26A Jodie's peer improvisation test results

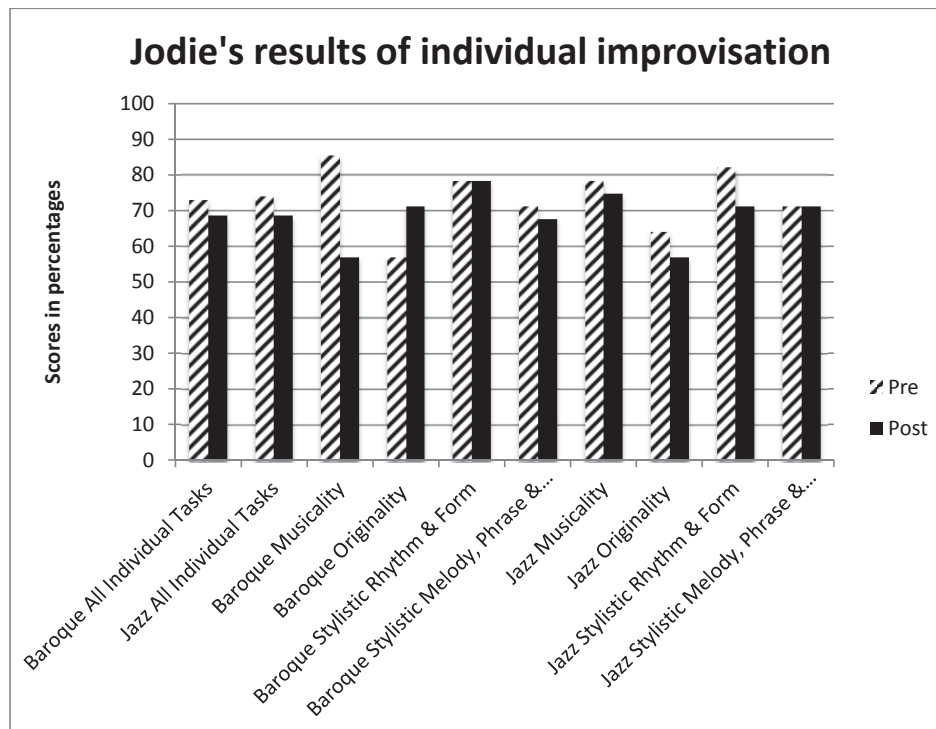


FIGURE 26B Jodie's individual improvisation test results

5.5.6.4 Jodie's overall progress and motivation behind learning harmony with and without improvisation

Jodie seemed to have developed her music theory knowledge more during the first part of the course than the second part. Given her extensive music training and practice playing the accordion for 20 years, her aural skills and basic theoretical knowledge were at good levels, as evidenced by the results of her pre-harmony test. Nevertheless, she could have developed her skills and knowledge further by the end of the first phase of the course (without improvisation). However, it seemed that her overall harmony knowledge stopped improving further during the second part of the course, as she showed progress in certain stylistic segments of harmony during the second half of the course, when the improvisation exercises were in focus. This could be observed during the improvisation exercises and the harmony tests, e.g. the aural recognition of the II-V-I and cycle of fifths chord progressions and the jazz pattern transcriptions based on the II-V-I chord progression. Nevertheless, the excellent level of harmony knowledge she acquired by the end of the first phase of the course together with her extensive (15 years) experience in improvising on the accordion and her jazz piano studies (2 years) established a solid foundation for deepening her understanding of stylistic improvisation in the improvisation phase.

During the entire course, I noticed that Jodie was more interested and motivated to learn both baroque and jazz harmony with the live music activities related to playing the piano. She was eager to sing and play or play along with the recording and score during the lessons. She also affirmed this in the FQ: *"Learning by doing is always the best way ..."*. However, during the improvisation phase, she particularly focused on the improvisation technique and she felt that her harmony knowledge improved with improvisation activities. She also added: *"It's more interesting and concrete to study by playing [and improvisation]"*.

She was eager to experiment and challenge herself in any kind of improvisation activities both alone and with me or other students, especially in jazz. She found the play-along exercises in both styles during the second part of the course less useful than the improvisation exercises. She also commented: *"It's more interesting and fun to study by playing anything, but maybe these jazz tasks [using improvisation] have been even more inspiring [and made it...] worth being here!"*

This could be observed during the lessons, especially in the video recordings, which showed her progress in improvising the melody and walking bass alone or with peers. She performed excellently in the post-improvisation tests in both styles, especially jazz. The notable development of jazz melody improvisations on peer accompaniment, especially in terms of rhythm feel, phrasing, and melody embellishment, positively affected the jazz melody transcriptions on the II-V-I chord progression. Jodie had a strong opinion about the usefulness of improvisation activities in both styles, with peers and individually, at the beginning of the improvisation phase, and her opinion was strengthened by the end of the course. She also recognised that the improvisations supported her aural skill development and she added, *"... I think it is not depending on styles of music"*.

Generally, in Jodie's case, learning the particular features of baroque combined with jazz harmony seemed to have been very beneficial and highly motivating: *"I think it is important and useful: the baroque style is full of genius ideas and that's why it [provides] a good basis for [learning jazz]"*. Furthermore, because she had extensive experience in improvisation in folk music and various popular genres, the various style-specific improvisation exercises refined her stylistic knowledge during such a short improvisation phase of the course.

5.5.7 Kathleen (Late IG)

5.5.7.1 Starting level of Kathleen's knowledge and musical skills

Kathleen was a third year exchange student in Music Education and also attended the musicology course at the university. Kathleen's main instrument was the piano that she had learnt for 10 years in classical style. She also took aural skill courses for 10 years and learnt classical harmony for 5 years. She had never learnt jazz. In addition, she had not learnt improvisation in the formal education context. She also emphasized that she had sufficient informal experiences in improvisation - *"a little here and there..."* - mostly individually and more in classical and baroque styles than in the jazz style. She wrote in the

email questionnaire that she generally listened to and played classical, rock, metal, and folk music in her spare time and sometimes jazz, but she listened to jazz very often and, occasionally, to baroque music.

Kathleen's overall performance in the pre-harmony test was moderately good in terms of harmony knowledge and aural skills. She achieved a total score of 50%, with a higher score in baroque harmony knowledge (61%) than jazz (40%), she remarked, "... *I was trained classically and I am more familiar with baroque ...*". Because she had no formal jazz theory or instrument training before the course, she entirely left out all the tasks that were related to the jazz chord and chord progressions such as analysis, writing, voice-leading, and aural recognition. It seemed that she also had less knowledge of the lead sheet symbols. In contrast, she performed very well in the baroque theoretical tasks since she had extensive classical background. In addition, she was the only student in the group who seemed to know how to work out the chords of the baroque chord progression from the figured bass; however, her voice-leading was not accurate and she left out the last chord of the four, achieving a score of 75% in the task. She performed well in the baroque excerpt analysis task, in which she identified most of the chords using Roman numerals. Interestingly, she seemed to have problems recognising the basic elements of music theory through listening, such as intervals, triads, and seventh chords, achieving a score of 60%. She performed poorly in transcribing the triads and seventh chords. She performed poorly in tasks involving melody transcriptions in both styles; her performance seemed to be in contrast with her the ten-year-long solfège and ear training in classical music. It seemed that she needed special training to develop her aural skills in order for her to accurately connect the listened information to the written score. It is important to remark that Kathleen had a different background in music education as she participated in the course as an international exchange student. However, she was very eager to learn piano improvisation and refresh her musicianship, since she had a strong classical background. Therefore, I hoped that she would be able to develop her aural skills as well as consolidate her knowledge of music theory through the practical music activities.

5.5.7.2 Increase in Kathleen's harmony knowledge during the course

The results of Kathleen's three harmony tests are presented in Figure 27. Kathleen could improve her overall knowledge of harmony by 11 percentage points during the first phase of the course. However, the overall scores showed quite similar improvements in both styles, mainly due to the achievement of learning many elements of jazz theory, such as the jazz nomenclature. She could perfectly work out 70% of the seventh chords from the lead sheet symbols with the correct extensions into the score, and vice versa, i.e. identify these chords from the written score by using the lead sheet symbols. Furthermore, she could almost perfectly work out the II-V-I chord progressions with the proper voice-leading and extensions. Her performance was outstanding, given that she had entirely omitted all of these tasks in the pre-test. In addition, it seemed that she

not only learnt the theory but also learnt to recognise these chord progressions and the cycle of fifths by Roman numerals through listening. Her pre-test performance in the baroque chord progression analysis and writing tasks highlighted that she already knew the voice-leading technique and Roman numeral system, since she had extensive classical harmony training. This background definitely could have contributed to her successful application of knowledge to the jazz theory tasks. Nevertheless, she almost perfectly completed the task of writing the baroque chord progression from the figured bass (91%) as well as identified all the chords from the baroque excerpt using Roman numerals, achieving the maximum score. She made similar mistakes in recognising and transcribing the basic elements of music theory such as intervals, triads, and seventh chords played on the piano. Furthermore, it seemed that she needed to develop her melody transcriptions technique since her performance in both genres was poor, similar to her pre-test performance. I felt that along with the listening and transcription exercises, this skill would help her perform the various improvisation activities well during the subsequent improvisation phase of course.

Kathleen showed a moderate 10 percentage points improvement in her overall scores of the harmony test during the improvisation phase of course, achieving a score of 68% in the post 2 harmony test. She was finally able to develop a solid knowledge of basic harmony, evidenced by the fact that 91% of her answers were correct in recognising and transcribing the triads in all positions and 80%, for the seventh chords. These results indicated an overall 25 percentage points development in her basic theory. She achieved excellent results in the analysis of Roman numerals of a baroque excerpt as well as in the task of writing the voice-leading from the figured bass. In the case of jazz harmony, she performed the chord writing and analysis tasks using the lead sheet symbols very well, resulting in an overall score of 80% for the seventh chords with extensions. She also perfectly completed the tasks involving II-V-I voice-leading with extensions. Furthermore, the aural recognition of II-V-I and cycle of fifths chord progression task was performed at a level similar to the post 1 harmony test, she made improvements in identifying the cycle of fifths with the correct Roman numerals. She was not confident recognising the extensions by listening to the chord progressions played on the piano. In contrast, it seemed that Kathleen's melody transcription technique still needed to improve; however, she could notate many more parts in both baroque variations and jazz patterns correctly in the post 2 harmony test than in the previous harmony tests. She made an overall 20 percentage points improvement during the improvisation phase that was due to the regular performance of not only the listening and transcription exercises but also improvisation activities.

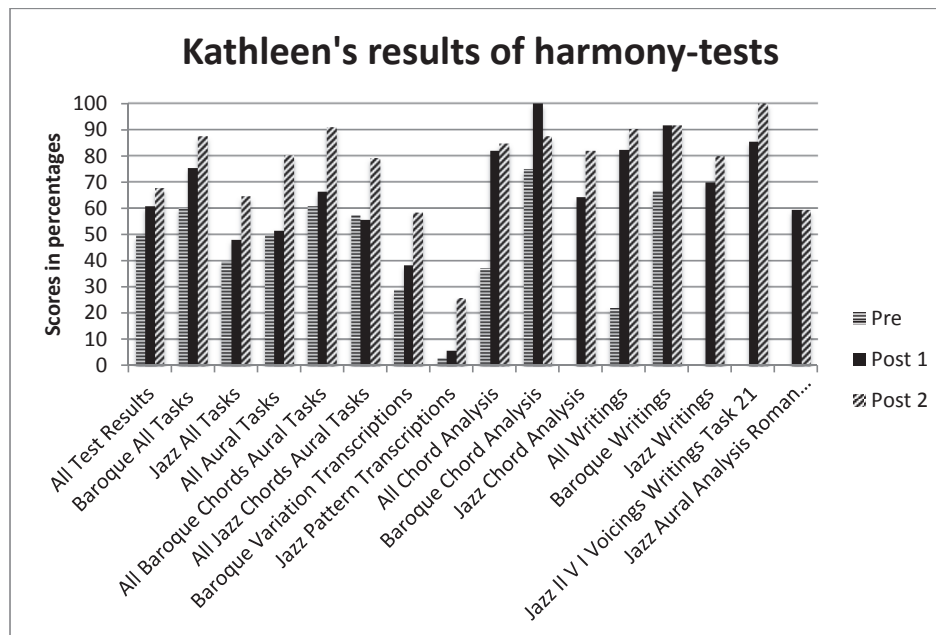


FIGURE 27 Kathleen's harmony test results

5.5.7.3 Development of Kathleen's improvisation skills

The results of Kathleen's improvisation tests are presented in Figures 28 A and B. While listening to Kathleen's first melody improvisation, I found that she had good piano skills but less experience in improvisation. She improvised three variations and closed the whole composition on the first bar of the fourth variation. Since the last short melody started from the tonic note, the close showed a slight hesitation to start at the fourth variation. Overall, the whole performance sounded moderately good with regard to the expression of dynamics and colour of tone. However, the evaluators rated the musicality fair. She constructed the melody line using mostly stepwise motions over two octaves, starting the theme with the lower register, ascending to the top at the second variation, and finally resolving to the original register. However, the main problem with the melody was that she used the D minor pentatonic and natural minor scale over the entire improvisation; therefore, certain notes did not fit well with certain chords such as the note C on the dominant chord. (It should be noted that the tension between C and C# could be considered an interesting sound, well known from folk music, blues, or the false relation in renaissance choral compositions, but in the current case, this was not consciously applied).

The rhythm patterns fit well with the chaconne bass and chord progression, in which she used the dotted rhythm on the third beat of the compound duple rhythm. It seemed that most of the evaluators highly valued the rhythm ideas. Two experts rated the stylistic awareness of rhythm and form good. With

regard to the melody phrasing and embellishment, the evaluators rated Kathleen's first melodies only fair. Nevertheless, I hoped that she would be able to improve her melody improvisations during the improvisation phase.

Kathleen's first individual improvisations on the i-V-VI-V chord progressions convinced me that she had good piano and aural skills. Despite her limited experiences in improvisation and the result of melody improvisation on my accompaniment, it seemed that she could express her own ideas with more confidence alone than with peers. She improvised a theme and three variations in 6/4 meter that sounded musical and quite original. However, she slightly overused the sustaining pedal but expressed the melodies with care in terms of tone of colour. With regard to the melody, she applied the harmonic minor that fit well with the chord progression. The theme melody sounded very much like a folk song from the Mediterranean area; therefore, it fit the chord progression, similar to the Spanish *Foglia*. She accompanied the melody with chords on the first beat of the bar. The theme and variations started on the upbeat to the fourth beat consisting of small phrases, mostly with stepwise motions and quavers combined with a dotted rhythm at the end. The first variation took the melody an octave higher and it smoothly dropped over the third variation. She was hesitant to go on at the end of the third variation as well as in the last variation; therefore, she could not keep the tempo well. Nevertheless, it seemed that she carefully listened to what she played and tried to figure out the best solution to continue.

Altogether, all the criteria were rated between good and moderately good, but the evaluators seemed to have had different opinions about this improvisation task as opposed to her pre-improvisation peer task. The baroque expert and piano pedagogue rated the musicality and the stylistic awareness of rhythm and form good and the originality as excellent. Altogether Kathleen's first individual performance showed a promising start to deepening her stylistic improvisation at the improvisation phase.

Kathleen's first jazz melody improvisation on my II-V-I chord progression accompaniment sounded surprisingly fine as compared to the baroque melody improvisation. It sounded lively, musical, rhythmically accurate, and devoid of any hesitation. She expressed the pulse of swing with subtle stresses. She improvised three variations that actually could be counted as four, because I played a four-bar-long intro aimed at presenting the tempo, swing, and the overall character. Nevertheless, she joined in at the third bar (the first bar of tonic chord) with a short phrase that sounded as a closing phrase and a fine upbeat to the next variation. In the following variations, she experimented with short phrases with stepwise motions and syncopations, which were developed with a longer melody to an octave higher. The last variation was a descending sequential melody with quavers that closed the whole composition. Three evaluators rated the two aesthetic criteria very good or excellent and the stylistic awareness of rhythm and form and melody phrasing and embellishment very good or outstanding. Therefore, it was surprising that the early music expert rated most of the criteria only fair. Nevertheless, Kathleen's first performance

received an overall rating of good. I was curious to see how she would be able to improve the melody improvisation during improvisation part of course.

Compared to her successful melody improvisation with my accompaniment, it seemed that Kathleen could not express her own ideas well individually. Overall, her four individual variations sounded poorer than her peer improvisation variations, receiving the rating of fair for all criteria. Her overall performance was not as well structured as her baroque performance. It had a number of stops while figuring out what to play on the left hand chord accompaniment. She attempted to improvise four variations in swing, but the phrases during the first two variations did not show the 4/4 meter and the structure of bars of the II-V-I chord progression well. The four-bar-long structure could only be heard from the third variation. The last variation closed the whole improvisation fine. All evaluators agreed that Kathleen needed to learn how to improvise alone on this material. Nevertheless, because of her good first performance in peer improvisation, I hoped that she would be able to improve her individual performance during the improvisation part of the course.

Kathleen seemed to improve slowly in terms of stylistic improvisation during the improvisation phase of the course, whereas she was much more confident improvising fine melodies freely without stylistic barriers. The video recordings showed examples for both cases. For instance, during the first two lessons, we learnt new chord progressions based on Pachelbel's Canon. We delved deeply into the particular features of baroque harmony using the figured bass and Roman numerals both by listening and analysing the score. We sang and played back the voices in the polyphonic texture and identified the passing notes, suspensions, and other melody embellishments related to the given chord progression. Kathleen practiced playing the theme and chord progression of Pachelbel's Canon along with the recording, both with and without the score. At the third lesson, we also started to improvise on this material in pairs. We focused on the stylistic traits of the Canon, but the students also improvised on the theme and chord progression in free-style. Kathleen was paired with Pamela, who had much more experience playing with peers. Kathleen wanted first to listen to Pamela's intro; therefore, Pamela played the chord progression patiently at a slower tempo to let Kathleen get used to her accompaniment style. Pamela altered the bass of the Canon to the descending scale of D major, resulting in the I-V6-vi-iii6-IV-I6-ii7-V7 chord progression. As Pamela's accompaniment sounded quite like popular music, Kathleen improvised fine melody variations that fit perfectly with Pamela's style. It seemed that Kathleen was more experienced in popular music since she remarked in the email questionnaire that she generally played various pop styles. They played eight variations together that sounded quite original. Kathleen's melodies were simple using both the pentatonic and major scales, but she consciously built-up the melody lines. She expressed her ideas very musically and confidentially. Whenever she was played a few notes that did not sound perfectly on the chord progression, she corrected herself with notes that fit better with the musical texture. It seemed that she listened carefully to what Pamela played. At the end of the eighth variation, Kath-

leen seemed to have been conscious of the form as she intended to finish the melody carefully by muting and slightly slowing down the music. However, Pamela kept playing with the accompaniment with the same intensity, so she played another variation while waiting for Kathleen's melody. Kathleen seemed to have run out of ideas since she wanted to finish earlier.

With regard to the stylistic improvisations, Kathleen seemed to have been less confident but eager to improve her skills. At the fifth lesson, we learnt new material such as Handel's Sarabande in D minor and explored the features of bass variations connected to the jazz walking bass. For comparison, we learnt the theme and chord progression of the Spanish Foglia and explored particular ornamentation in the melody by Lully and Marin Marais by listening, singing, and playing the piano as well as from the written score. At the sixth lesson, when we started to improvise on the Foglia variations, Kathleen played the chord progressions i-V-i-VII-III-VII-i-V in various positions. She had problems with the leading note, as she wanted to play a minor chord on the dominant key. After she became more confident with voice-leading, I encouraged her to make slight variations on the rhythm in the 3/4 meter, while I improvised the melody variations. She also attempted to improvise melody variations on my accompaniment. First, she was uncertain about what to play, so I suggested she play the original theme of the Foglia. In addition, as I accompanied her, I gave a few ideas of embellishing the chord notes with lower neighbour notes with a quaver and dotted rhythm, turns, suspensions, and trills. She copied my ideas well and developed these ideas by herself. We played another four variations and her melodies improved very well. The last variations sounded excellent in terms of embellishment and rhythmical ideas.

Kathleen was enthusiastic about exploring the improvisation of all parts of music, i.e. melody, accompaniment or walking bass line, together with other students or with me during the lessons. In contrast, she was rather passive in the individual improvisation tasks. Nevertheless, I never forced any of the students to improvise alone. In the case of Kathleen, whenever we prepared the material for improvisation through various activities such as listening, singing and playing, or playing along the recorded music and from the score, she was more enthusiastic to join improvising in duos or trios. During the first five lessons, we delved deeply into the extensions and colouration of the cycle of fifths chord progression mostly by the jazz standard song Fly Me to the Moon. We also explored the components of the cycle of fifths, i.e. the II-V-I chord progressions in both major and minor keys, through various exercises such as listening to recordings, sing and play, and transcribing the chord progressions in various positions and spacings. By the sixth lesson, Kathleen seemed to have been ready to explore the improvisation on the cycle of fifths chord progression. She accompanied Pamela's walking bass. First, she played the chord progression without any rhythmical variation but with proper voice-leading. She made a few mistakes in omitting the leading note from the dominant chord at the cadence of the cycle of fifths. It seemed that this was a recurring problem for her since the beginning of the course. They played several variations on the cycle of

fifths, so Kathleen had opportunity to practice the comping. Slowly, after many rounds, she dared to vary the rhythm with a few syncopations, providing the swing pulse.

Kathleen's comping technique improved remarkably by the eighth lesson when she played in several trios. She was confident in providing the cycle of fifths and II-V-I accompaniments with excellent tempo and syncopations as well as voice leading. By the end of the lesson in the last improvisation exercise, she accompanied Larry's walking bass and Samantha's melodies. Kathleen was very creative, as she changed the positions of chords and improvised with fine chord figurations and arpeggios.

With regard to the melody improvisation, she was keen to experiment her melodies especially in trios. The greatest improvement was seen in her melody improvisations where she attempted to play various chord figurations instead of playing exclusively short and scale-like melodies. At the eighth lesson, she improvised melodies on the II-V-I chord progression. As we already got acquainted with the Take the A Train jazz standard and analysed its II-V-I chord progressions in the previous lesson, Kathleen also attempted to experiment with chromatic notes and improvised similar motives of the jazz standard. She also improved her rhythmical expression and swing feel; she confidently used short phrases with similar rhythm patterns. She also attempted to play the walking bass two times during the course. The video recording of the sixth lesson showed her first attempt at this with Pamela's accompaniment of the cycle of fifths chord progression. She had difficulty reaching the next root of the chord as she wanted to walk the line only using the diatonic scale. I suggested simplifying the bass line to the roots and fifth and chord figurations and then applying the chromatic notes in the walking bass. She seemed to have grasped these elements quickly. At the eighth lesson, she provided the bass for the II-V-I in a trio, but she did not experiment too much and played mostly the roots and fifth of chords, sometimes combined with some triadic figurations.

Nevertheless, given Kathleen's strong classical background and lack of improvisation skills, especially, in jazz, she was able to make moderate progress in jazz improvisation during the improvisation phase of the course.

Since the beginning of the improvisation phase Kathleen, showed good improvement in all the criteria, improvising melodies on my chaconne accompaniment. She seemed to have expressed her ideas more confidently and fluently without any hesitation. This confidence had a positive effect on the musicality that was rated good. She expressed the dynamics of the melody lines and the colour of tone with care. One of the piano pedagogues rated the musicality excellent, but altogether the evaluators rated it good. She improvised only three variations after my intro but would have sounded better with four in terms of form. Nevertheless, she played a short finishing phrase on the tonic chord after the third variation. Kathleen's melody ideas were quite original since she improvised in the minor pentatonic scale. However, it seemed that she was uncertain about applying the harmonic or melodic minor especially on the dominant chord. I observed that she had problems with the leading note during the les-

sons, either in the voice-leading of the chord in the piano accompaniment or in the various transcription or improvisation exercises. Nevertheless, her theoretical knowledge in voice-leading writing tasks improved during the course, so I assumed her preference for the pentatonic scale could have been the result of her informal music activities involving playing folk music. The rhythmical ideas of improvised melodies were simple but accurate in terms of expression. With regard to the melody embellishment, she did not apply any of the learnt ornaments, but the whole melody line of the improvisation sounded fine. The musicality and stylistic awareness of rhythm and form was rated good and the melody ideas as well as the originality received slightly lower ratings from the evaluators. Nevertheless, Kathleen seemed to have improved her stylistic melody improvisation during such a short improvisation phase of the course.

While I was listening to Kathleen's individual pre-improvisation on the i-V-VI-V chord progression, I felt she had problems with the structure of the chord progression that negatively affected the form. She improvised a theme and three variations. She seemed to have made a mistake by playing the first variation only with the i-V-VI chords, but after the two variations based on the original chord structure, she finished the improvisation with the same chord progression ending on the tonic chord. Therefore, she improvised 15 bars: i-V-VI i-V-VI-V i-V-VI-V i-V-VI-i. She formulated a seven-bar question and eight-bar answer that sounded very fine. She improvised in medium slow tempo in 2/4 meter that I appreciated very much, since we practiced the baroque improvisations mostly in 3/4 meter. However, she played the bass notes with the left hand that sounded slightly poor. The melodies mostly consisted of stepwise motions without the particular embellishments or ornaments that we explored. The general rhythm pattern of the theme as well as the variations was the crotchet and two quavers that stopped on a minim at the seventh and the last bar, sounding like question and answer. Unfortunately, despite the effort made to express original ideas, the entire performance sounded only moderately good, and all the evaluators seemed to have agreed regarding the ratings for all the criteria. Kathleen's individual post-improvisation grades were slightly lower than her pre-improvisation grades.

While I listened to and analysed Kathleen's peer post-improvisation melody, I found that her performance sounded as good as her pre-improvisation performance, but the average grades for all the criteria were slightly lower than those for her pre-improvisation performance. The reason behind this was that the two baroque expert evaluators rated her performance fair against all the criteria, while the others rated it good or excellent. Kathleen improvised a theme and three variations that sounded fluent and musical. She attempted to use the full major scale combined with a few pentatonic phrases. For the theme, she played an ascending scale-like melody over the octave that included a fine chromatic slide. She developed this melody mostly with scale-like phrases and quavers. The second variation was similar to the theme but the rhythm of the second part sounded poorer because she played only crotchets on the main beats over two bars. She closed the whole improvisation with a fine melody but

the syncopated rhythm patterns did not sound perfectly accurate this could have affected her rating for stylistic awareness of rhythm and form. With regard to melody phrasing and embellishment, she played mostly scale-like melodies. Overall, the criterion of originality received the lowest rating, but the other criteria were rated moderately good overall.

Despite her overall good performance in melody improvisations, it seemed that Kathleen could not express own ideas very well individually. She played only the roots of chords of the II-V-I as the left-hand accompaniment that made the overall melody sound quite poor. She attempted to play the theme and three variations in 4/4, but the theme sounded weird because she played the Dm right after the tonic chord resulting in the II-V-I-II chord progression. However, she corrected this over the three variations, and, overall, all her melodies sounded quite simple in terms of phrasing and embellishment. The rhythmical solutions also sounded very simple, mostly following the crotchet and two quavers rhythm pattern. Kathleen's performance was rated fair against all the criteria. It seemed that she needed more time to improve her individual piano improvisation skills especially in jazz, as she was not familiar with jazz at the beginning of the course. She also remarked that "...there are so many rules that it seems improvisation is very difficult or not that fun. But with more knowledge about the style, it is much more profitable and enjoyable".

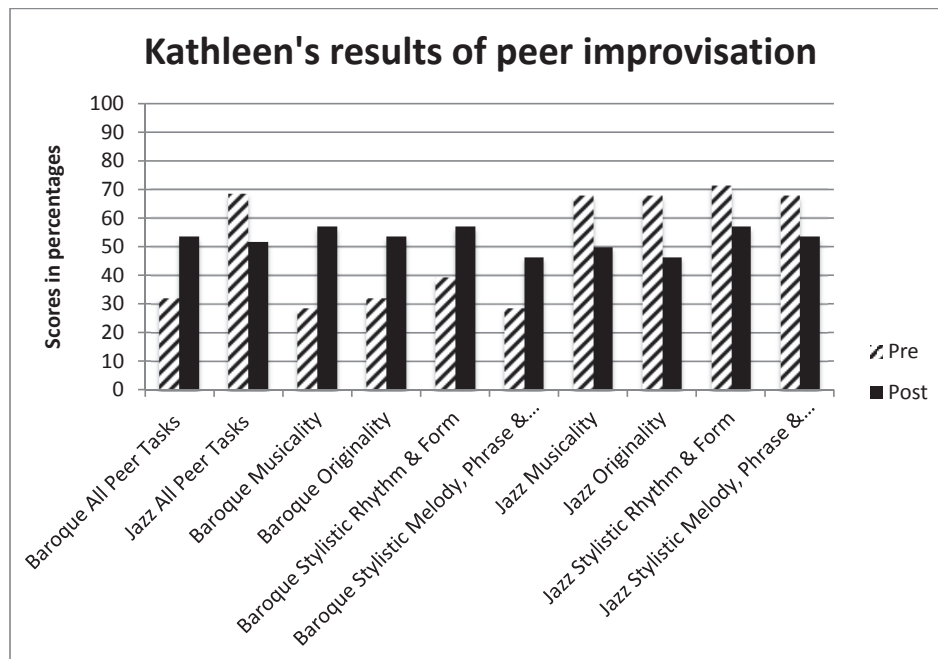


FIGURE 28A Kathleen's peer improvisation test results

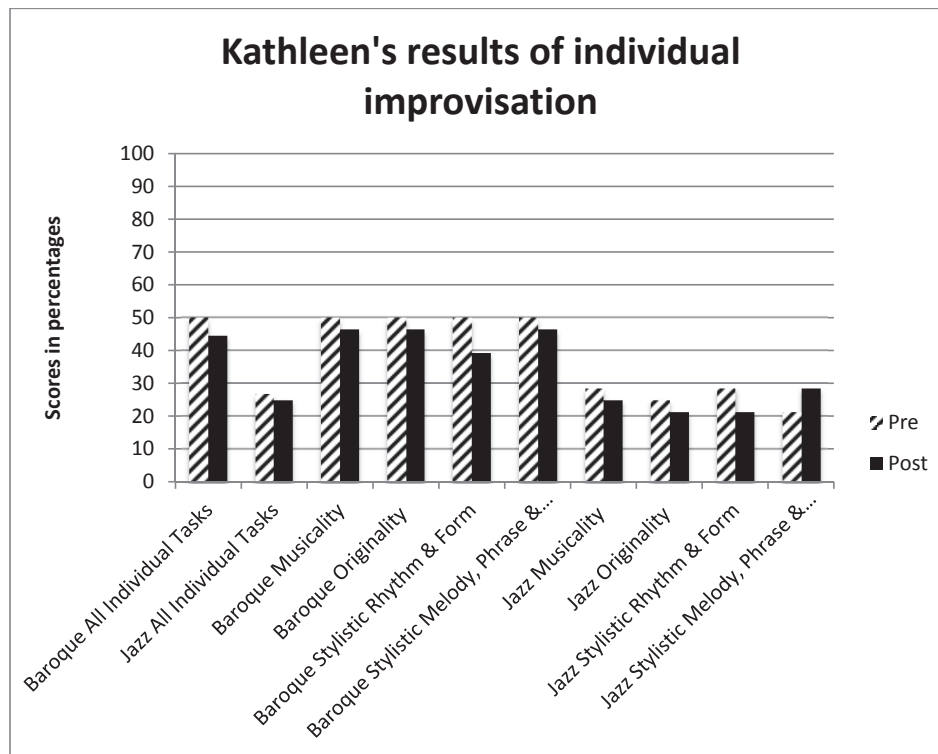


FIGURE 28B Kathleen's individual improvisation test results

5.5.7.4 Kathleen's overall progress and motivation behind learning harmony with and without improvisation

Kathleen's theoretical knowledge developed more during the first part of the course than the second part, but her practical skills gradually improved over the entire year. Her overall starting level of knowledge and basic musicianship skills was already good at the beginning of the course mainly because of her classical background. This meant that she had solid knowledge of certain elements of music theory and skills in various techniques from the classical music theory. For instance, she was familiar with the Roman numeral analysis, figured-bass system, and voice-leading technique; she progressed in these aspects to an excellent level by the end of the non-improvisation phase of the course. This knowledge also contributed to her grasping the jazz theory relatively quickly. She also explained the following in the FQ: *"The first semester began by refreshing my previous knowledge in baroque harmony. I think because baroque was more familiar to me, it felt more relatable. In this way, I was able to grasp the concepts more easily branching from my theoretical knowledge and slowly applying it practically"*.

However, compared to the improvisation phase, in the first phase of the course, her scores in jazz harmony improved to a remarkable extent; she felt that her knowledge deepened more with improvisation, implying that the vari-

ous exercises such as listening, writing, transcribing, singing and playing, or playing along with the recording and score influenced her learning progress. These activities helped her recognise the chords and chord progressions both from the score and by listening as well as working out the chords and chord progressions into the score both from Roman numerals or lead sheet symbols. Furthermore, because she had never learnt jazz piano or jazz theory before the course, she needed to consolidate her jazz theory knowledge in order to be ready for improvising. *"In the second semester, I was much more comfortable a) with the group and b) with the material. I was not so scared of making mistakes as before. So, improvisation wasn't as terrifying for me. And because jazz (theory) was not so familiar to me, it really helped to hash things out on the keyboard. This helped the concepts make more sense to me"*. She also added that especially in grasping jazz theory *"improvisation....was very helpful, it makes theories into tangible, familiar sounds"*.

Her piano improvisation skills seemed to have developed moderately during the improvisation part of the course. However, she would use her improvisation skills whenever she needed to play only one part of the music, such as the melody with the accompaniment of peers. This improvement was observed in both styles during the lessons, but her post-test performance was much better in baroque style, because she had much more experience in baroque than in jazz. Because she did not have any jazz piano and formal improvisation training before the course, she needed to learn the basic elements of jazz theory and the way to play various chord accompaniments. She also acknowledged the usefulness of the sing and play and playing along exercises during the course. These skills developed over the entire year, but her theoretical knowledge developed during the first phase and her chord accompaniment technique, during the improvisation part of course. In contrast, Kathleen's individual improvisation remained at the same level as it was in the beginning, despite the fact that she had more informal experiences improvising alone. However, she usually played more folk and popular music in her spare time; the current course and 11-week-long improvisation training seemed to have been too short not only for learning the certain stylistic traits of baroque and jazz but also for applying these to the individual improvisation.

Her rating of the usefulness of various improvisation exercises also reflected her changing interest, motivations, and success in peer and individual improvisations in both styles. Her appreciation of the peer improvisation exercises increased notably especially in jazz compared to the improvising alone. Nevertheless, she appreciated the improvisation exercises when she realised that her theoretical knowledge and practical skills became more solid: *"I think piano improvisation is helpful (for learning harmony) but it is also intimidating initially. But with more knowledge about the style, it is much more profitable and enjoyable"*. She also felt that improvisation was beneficial to her aural skills. *"Yes. I think improvising creates a well-rounded learning environment. Your fingers, rhythm, and inner-hearing all come into play. The only thing I found difficult is labelling what I hear, but improvisation made it a bit easier for me to recognize certain sounds"*. This remark explains her slower progress in those tasks in which she needed to recognise the basic harmonies. This was observed not only in the lessons but also in both

post-harmony tests. Her melody transcriptions in both styles improved slowly over the year, and she began to value these exercises highly, as evidenced by her ratings. Nevertheless, the various melody improvisation exercises seemed to have positively affected her understanding of the relationship between the harmony and melody structure. Thus, it seemed that the improvisation activities could immediately enhance the aural recognition and transcription technique of baroque variations and jazz patterns during the improvisation part of course.

Altogether, it seemed that the combination of learning the two genres together positively influenced Kathleen's theoretical and practical knowledge in harmony. She also affirmed: *"... the styles have many similar attributes. ... Personally, learning the two styles together was great for me because I was trained classically and I am more familiar with baroque. Teaching together with jazz gave me better understanding of the different style, so that I was not jumping into something that I was completely clueless about"*.

5.5.8 Samantha (Late IG)

5.5.8.1 Starting level of Samantha's knowledge and musical skills

Samantha was a first year Master's student in music therapy. She had learnt classical piano for 2 years and classical harmony for 2-3 years before the course. She had a sufficient background in jazz: one year of formal jazz theory studies and less than one year of piano studies. She did not take the free piano accompaniment (vapaa säestys) course and had no formal piano improvisation training before the course. She had adequate experience of improvising in informal settings mostly alone: *"only every now and then"*, as she commented in the first questionnaire. In addition, as a part of the music therapy degree, she had some experience of group improvisation mainly using percussions. In contrast, she had at least 15 years' solfège experience as she stated, *"all my life, I think"*. She wrote in the email questionnaire that she usually listened to Latin-American, African-Caribbean, jazz, classical and rock music, and also baroque music. She explained: *"When I was 14 or 16 years old, I used to listen more classical music but pop was there strongly too. At the ages of 16-20 years, I listened mostly jazz. And after that, rock, Latin, jazz, and classical music"*.

Samantha performed moderately well in the pre-harmony test, with an overall score of 60% that was equally shared between the two genres. She seemed to have had very good basic knowledge in harmony, evidenced by her accuracy in recognising 85% of the intervals, triads, and seventh chords by listening. She made very few mistakes in transcribing these elements of music theory. She seemed to lack style-specific harmony knowledge mainly because she spent few years studying either classical or jazz harmony. She entirely left out the task of jazz chord writing from the lead sheet symbols, the two chord progression voice-leading tasks in both styles using either the figured bass in baroque or Roman numeral marking in the jazz II-V-I chord progression. She also omitted the score analysis of baroque excerpt by Roman numerals. Howev-

er, she seemed to have known the nomenclature, i.e. the lead sheet symbols and the Roman numeral system but she could apply this knowledge partly in two tasks related to jazz harmony. She recognised a few triads in the seventh chords with extensions used in jazz from the written score by the lead sheet symbols, achieving a score of 21%. Furthermore, she performed quite well in recognising the jazz II-V-I and cycle of fifths chord progressions through listening, achieving a score of 50%. This achievement was due at least to the correct Roman numerals of II-V-I and cycle of fifths without marking the seventh chords or extensions. In contrast, she performed very well in the melody transcription tasks, mainly because of her extensive experience in solfège. She could perfectly transcribe the first two baroque variations of the three (with only a missing sharp to the leading note) and she managed perfectly the first half of the third variations, in which she altogether scored 83% of the maximum. Her very good aural skills and transcription technique also could be seen in the jazz transcriptions. She almost perfectly succeeded in writing the first pattern and the half of the second pattern, which was scored altogether 50% of the maximum.

Samantha's performance in the pre-harmony test showed that she needed to learn the style-specific elements of music theory, such as the chords and extensions used in jazz and the meaning of the lead sheet symbols, and certain style specific techniques in music theory such as voice-leading, she had good basic knowledge and excellent aural skills that seemed to have given her promising start at the beginning of the course.

5.5.8.2 Increase in Samantha's harmony knowledge during the course

The results of Samantha's three harmony tests are presented in Figure 29. Samantha improved her overall knowledge of harmony by 10 percentage points during the first phase of the course, when she did not improvise, achieving a score of 70%, mainly because of the tasks related to baroque harmony in which she scored 80%, while the overall scores in jazz remained at the same level as the pre-test. However, many differences could be seen in her development in various tasks. With regard to basic harmony, she showed improvements in recognised and transcribed the triads and intervals (baroque tasks), achieving a score of 91%. However, the greatest development (from 0% to 100%) could be found in the baroque chord progression score analysis, in which she could perfectly identify the chords using Roman numerals, but she left out the task involving chord progression voice-leading from the figured bass. It seemed that her knowledge of the voice-leading technique developed slowly, as she also omitted the jazz II-V-I chord progression writing task. In other tasks related to jazz harmony, she completed both chord writing and chord identification tasks using lead sheet symbols, achieving a score of 30%, but in the writing task, she only worked out the basic jazz chords (seventh and a triad with an added note) that did not have extensions.

In other tasks, such as the aural recognition of chord progressions by Roman numerals, she made many mistakes in the tasks involving the cycle of fifths. Similarly, she did not perform well in the tasks of identifying and tran-

scribing the seventh chords in both root positions and inversions (jazz chords). With regard to the melody transcriptions, she maintained a high result in the baroque variations, managing the first two variations perfectly, with one negligible mistake: a missing sharp to the leading note; this a problem in the pre-test also. In addition, she improved slightly with the third variation resulting in a total score of 87%. In jazz, altogether, she could not improve her scores. She transcribing the second pattern well, while she misplaced many notes in the first melody. Altogether, it seemed that Samantha needed more time to learn the seventh chords with extensions used in jazz and the technique to connect the chords in various placements and voice-leading. I hoped the improvisation activities would be able to foster her learning progress during the subsequent improvisation part of the course.

Samantha showed a moderate improvement in her overall scores by 7 percentage points, resulting in a total score of 68% in the post 2 harmony test. This development was mainly due to some of the jazz tasks, where she slightly improved at certain tasks, whereas the others seemed to have been more challenging than at the post 1 harmony test. This could be seen in the first three tasks in which she needed to recognise and transcribe the basic elements of harmony. She made more mistakes recognising the triads (baroque chords) at the post 2 harmony test than at the pre-harmony test, achieving a score of 90%. She succeeded in perfectly transcribing all intervals and triads in all positions. With regard to the seventh chords (jazz chords), she made only two mistakes, achieving a score of 89%. The greatest improvement could be seen in the jazz chord analysis task, in which she could identify 71% of all seventh chords in the score using the lead sheet symbols. She made mistakes in three chords in terms of the quality of the chord, and she could successfully identify all extensions. In the jazz chord-writing task, in which she had to work out the seventh chords with extensions from the lead sheet symbols, she showed moderate improvement, as compared to her performance in this task at the previous test.

Another achievement was that she could identify most of the II-V-I chord progressions with various extensions and most chords of the cycle of fifths perfectly (69%). The significance of this development was that she not only learnt these elements of music theory but also seemed to have been able to recognise them by ear. The only task in jazz was the II-V-I chord progression voice-leading task that was almost untouched. It seemed that Samantha still found it challenging to apply her theoretical knowledge to the chord progression voice-leading tasks. However, she attempted to solve a part of the baroque chord progression voice-leading from the figured bass task, as she only wrote the soprano line and the last full chord. Unfortunately, she did not write the quality of chords in the baroque excerpt analysis tasks, so she achieved a score of 62%. Samantha showed improvements in her melody transcriptions in both styles especially in jazz (by approximately 50 percentage points). However, she had already performed very well in these tasks at both pre-harmony tests, especially in baroque. She almost reached the 100% mark in the three baroque variation transcriptions, with only one mistake that was the missing leading note, similar

to her mistake in the previous tests. She could almost perfectly transcribe both jazz patterns reaching the 92% of the total scores, with mistakes in three alterations. Samantha's improvement in all kinds of aural recognition tasks indicated that her excellent aural skills contributed to her understanding of the music theory.

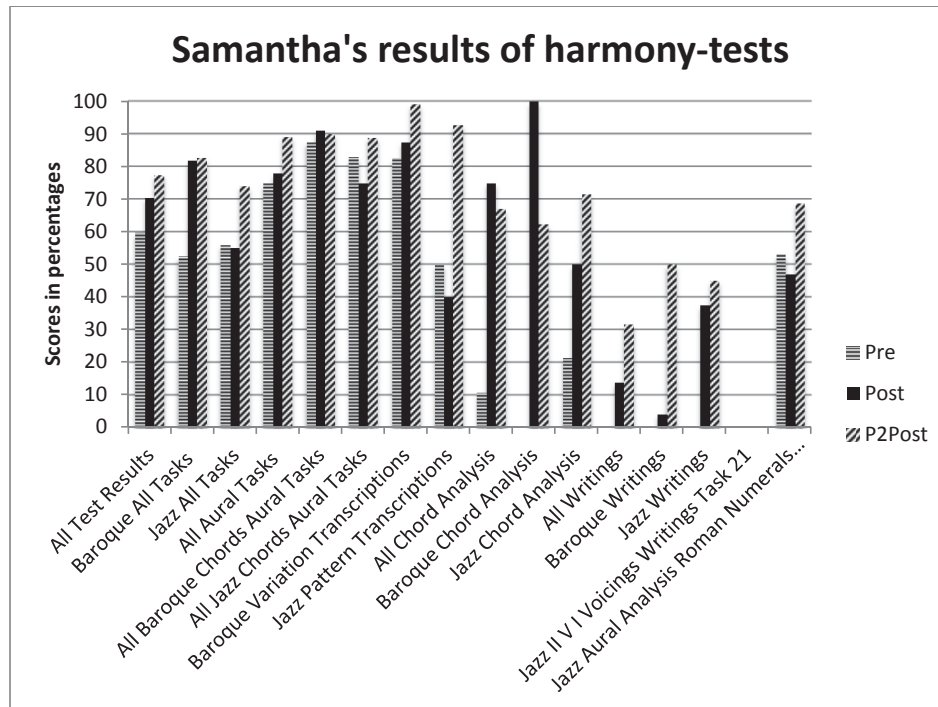


FIGURE 29 Samantha's harmony test results

5.5.8.3 Development of Samantha's improvisation skills

Samantha's improvisation test results are presented in Figures 30 A and B. Samantha's first melody improvisation on my chaconne accompaniment sounded moderately good. This task seemed to have been quite challenging for her because she had less skilled at playing the piano skills than the other students. Nevertheless, she eagerly corrected the misplayed notes by ear. She improvised a theme and three variations in which the theme melody and the second variation sounded the finest. She used mostly crotchet and quaver rhythm following the chaconne rhythm pattern, but as she misplayed many notes, the tempo of the improvisation sounded rather inaccurate. Nevertheless, she seemed to have been quite musical in her performance and improvised quite original variations, applying the harmonic minor well. At the end of the variations, she also attempted to close the melody on the tonic chord. The musicality and the originality received quite different ratings from most of the evaluators who rated her performance good against all the criteria. The stylistic awareness of rhythm,

form, melody, phrasing and embellishment received rather similar ratings, resulting in an overall rating of fair. Notwithstanding, given Samantha's limited experience playing the piano and improvising, her first attempt sounded promising at the beginning of the improvisation phase.

While I was listening to Samantha's first individual improvisation on the i-V-VI-V chord progression, I felt her main problems were the result of her limited proficiency in playing the piano. She had problems expressing her ideas, but it seemed that she had good and original ideas. She attempted to improvise a theme and three variations by playing the bass note of the chord with her left hand and the melody with her right hand. She corrected the misplayed notes and tried to figure out how to continue the melodies without making the tempo inaccurate. It was also difficult for her to identify the rhythm and meter because of the frequent stops and hesitations. Overall, the evaluators rated her first performance poor, but the musicality received a rating of fair. I appreciated her eagerness to finish the third variation to complete the form; she seemed to have attempted to apply many of the elements of melody embellishment that we had learnt during the first part of the course.

Samantha's first melody improvisations on my II-V-I accompaniment in swing sounded much better than her baroque melody improvisations. Given of her limited experiences in piano improvisation and the fact that she learnt jazz piano for less than a year, she could express her own ideas in jazz more confidently than in baroque. This could have been partly due to her enthusiasm for learning jazz and interest in listening to jazz. She improvised a theme that sounded quite fine except for one chromatic note. She started her theme on the second bar (dominant chord) on my intro, consisting of stepwise motions within a fourth interval but the notes fit to chords. The theme also included fine syncopations. The first variation extended the melody to a wider interval and also included chromatic notes. The rhythm was much simpler and the theme started with an upbeat, but it only continued with crotchets on the main beats in the 4/4 meter, making the rhythm slightly flat. The second variation reminded me of the theme in terms of the start and the rhythmical solutions. She also led the melody to the higher register that sounded fine. The last variation did not sound too interesting, mainly consisting of repetitions of notes and a chromatic upper neighbour note (D flat) that did not fit well with the dominant chord. Overall, she had problems keeping the tempo and rhythm accurate, but it seemed that she had fine ideas in terms of melody. The evaluators rated the stylistic awareness of rhythm and form fair, but the melody, phrasing, and embellishment received more diverse ratings that increased the overall rating of her performance. The musicality was also rated good, whereas the originality, only fair. Samantha's first performance sounded quite promising, and I was curious to see how she would improve her melody improvisations during the improvisation phase of the course.

From Samantha's first melody improvisation with my accompaniment, it seemed that she could not express her own ideas well individually. She attempted to improvise a theme and two variations that sounded poor. She tried

to apply some of those melodies that she improvised on my accompaniment, but the number of stops while figuring out the bass notes with the left hand seemed to have been extremely challenging. The stylistic awareness of melody, phrasing, and embellishment were rated poor by all the four evaluators. The other criteria were rated fair, but the overall rating still remained poor. Nevertheless, I appreciated the fact that Samantha did not reject this task and tried to improvise something alone.

Samantha showed slow improvement in improvising with various baroque material during the improvisation phase and she was much more enthusiastic to join in the peer improvisation exercises. She made quick improvement in melody improvisations that could be seen in the videos. After the first two lessons, we learnt using new material based on Pachelbel's Canon. We listened to various recordings, sang and played the voices of the Canon, analysed the harmony using both figured bass and Roman numerals, and explored the melody embellishments. Samantha practiced playing the theme and chord progression in various starting positions, but she did not play along with the recorded music. The video of Lesson three showed her eagerness to explore the melody improvisation on this material in pairs without particular stylistic barriers. Pamela accompanied her melodies at a much slower tempo, patiently encouraging Samantha. They played four variations that sounded very good for the first attempt. The third variations sounded more uncertain, but she varied the rhythm with dotted rhythm. The last descending melody was the most musical and original that she extended to the whole octave. Altogether, this was a good experiment and made her more confident to join in other melody improvisations.

At the fifth lesson, we used new materials such as Handel's Sarabande in D minor and the Spanish Foglia. We explored various ornamentations in the melodies through listening to recording and my playing on the piano and sang and played the chord progressions and the voices on the piano. We also explored the features of bass variations connected to the jazz walking bass. At the sixth lesson, when we started to improvise the Foglia variations, Samantha did not demonstrate the chord progression but rather tried to improvise melody variations on my accompaniment. I suggested she start with the original theme and slowly vary it. She played the Foglia theme at first and started to make few rhythmic variations. She extended the melodies to higher register and played much more fluently at the beginning. She also tried to embellish the melody with various figurations and ornaments we had learnt.

The rhythm was not perfectly accurate a few notes were misplayed, but at the third variation, she improved. Altogether, we played four variations with the repetitions. In the last two variations, she closed the melodies on the tonic that sounded very musical. Samantha applied certain theoretical elements very well, for instance, the harmonic minor and stylistic traits, in her baroque melody post-improvisation test. It seemed that her excellent aural skills positively affected her improvisation progress, and vice versa, as evidenced in her outstanding baroque transcription result at the post 2 harmony test. In her post-

improvisation melody test, she expressed her fine ideas of form as she formulated a musical question and answer, and despite her simple rhythmic solutions, the overall performance sounded good and musically appropriate. The evaluators also rated this performance slightly higher, between fair and moderately good, than her pre-improvisation peer performance.

Samantha seemed to have improved her jazz improvisation slowly, since she had very limited experience with it and had more technical barriers. Therefore, she did not want to improvise alone with two hands during the lessons. Nevertheless, she was enthusiastic to explore the improvisation in all parts of music separately, i.e. melody, walking bass line, and chord accompaniment, together with other students or with me during the lessons. During the first five lessons, we delved deeply into the extensions and colourations of the cycle of fifths chord progression, mostly based on the song *Fly Me to the Moon*. We also explored the components of the cycle of fifths, i.e. the II-V-I chord progressions, through various exercises. Playing the chord progressions, especially with four or five voices, seemed to have been challenging to her because of her limited technical abilities, but she kept practicing. She improved her voice-leading technique at a slower pace than the other students, but she transcribed the chord progressions in various positions and spacings well, since she had very good aural skills.

At the sixth lesson, we started to improvise the cycle of fifths chord progression, but the students also explored the chord accompaniments at various positions and applied the extensions to the seventh chords. Samantha also attempted to play the chord progression, but she had many technical problems. Her performance improved very much by the eighth lesson when she played the accompaniment of II-V-I for Jodie's bass and Kathleen's melody improvisations. However, she only played the seventh chords mostly at one position and without particular rhythm variations; she concentrated more on the correct voice-leading. With regard to the melody improvisations, she joined in improvising with peers in trios, only from the eighth lesson onwards. She improvised melodies on II-V-I chord progression. She improvised simple scale-like melodies, mostly in an octave interval. She played crotchets on the main beats and varied the rhythm moderately with quavers and syncopations. She also challenged herself to play the walking bass for the very first time at the sixth lesson on Jodie's cycle of fifths chord accompaniment. Samantha played the bass notes of the chord progression and slowly added few upper and lower diatonic and chromatic upbeats. She also tried to fill the chord notes with scale-like motives. At the eighth lesson, she played the walking bass with Pamela's melody improvisations and Kathleen's II-V-I chord accompaniment. Samantha had problems keeping the pulse steady and mostly played the roots of the chords combined with the fifths of the chords and very few scale-like motives. Altogether, given her limited piano skills and experience in improvisation, there was an improvement in her skills during such a short improvisation phase of the course, especially in improvising melodies with peers. Furthermore, she valued and enjoyed all of these activities.

Samantha's post baroque melody improvisation on my accompaniment sounded much more fluent and musical than her pre-improvisation performance. She improvised four variations which reminded me of a folk song. The first variation ascended sequentially and sounded like a question, while the second variation turned downwards at the middle of the sequence like an answer. The third and fourth variations also sounded like a question but she varied the previous period: in the third variation she varied the rhythm with a dotted rhythm pattern with note repetitions, whereas in the last variation, she varied the melody line. Samantha made slight mistakes and played the rhythm slightly inaccurately from the second period, but altogether, the simple melodies sounded quite original and fine. She applied the harmonic minor well and her sense of form improved. The evaluators seemed to have very different opinions regarding the aesthetic criteria. The most extreme ratings, excellent and poor, were given by the two baroque expert piano pedagogues. The stylistic criteria were assessed quite similarly, between fair and moderately good. Altogether, Samantha showed moderate improvement in her melody improvisations during the improvisation phase.

Samantha's post individual improvisation on the i-V-VI-V chord progression improved very much during such a short improvisation phase. However, she had problems expressing her ideas, as seen in her first improvisations because of her limited technical abilities. She improvised three variations in 3/4 meter, resulting in 12 bars that sounded very fine and quite original in terms of the form and the melody line. She played the melody with her right hand and the roots of the chords with the left, as the accompaniment. The first melody ascended up to the octave with a dotted rhythm pattern over the first two chords and descended down over the last two bars. The second variation consisted of a dotted rhythm and sounded like a question. She applied both the harmonic and natural minor scales on the chord progression, especially at the last variation that started like the previous two melodies but descended at the end to the dominant note A over the natural minor, resulting in a fine Phrygian close. Unfortunately, Samantha's continuous stops made the tempo very inaccurate and the overall performance slightly flat. Nevertheless, she had good ideas and developed her stylistic knowledge and piano skills during the improvisation phase. Her performance also sounded much more musical than that in the pre-improvisation test. Altogether, all criteria received very similar ratings from the four evaluators: moderately good. The originality was, however, rated lower.

Samantha's post-improvisation peer melody sounded as good as the pre-improvisation one, but there were slight differences in the improvements in the four criteria. Her expression of rhythm and pulse in swing improved, but the melodies were not as interesting and elaborate as those at the pre-improvisation. She improvised three variations after my intro. The theme melody started with a repeating phrase on note D. It was embellished with the lower chromatic neighbour that continued with the descending melody with crochets on the main beats over the Dm7 and G7 chords to the note C. She played a similar re-

petitive motive on the note C over the two bars on CMaj7 that she had started with. In the next two variations, she moderately varied these ideas, but she did not combine the melodies with any other figurations or embellishments and only kept using short stepwise motions. However, she varied the rhythm well over the next variations using more syncopations and quaver motions. Nevertheless, she played much more fluently and consciously than at the beginning of the improvisation phase. The evaluators seemed to have similar opinions about the originality, rating it fair, while the musicality and the stylistic awareness of rhythm and form and melody phrasing and embellishment were rated moderately good.

Despite her progress in baroque individual improvisation, Samantha still could not express her own ideas well in jazz. Her performance sounded very much like her first individual improvisations. She attempted to improvise a theme and two variations on the II-V-I chord progression using only a simple bass note accompaniment that sounded slightly more fluent and structured than the pre-improvisations. The melodies were very much the same with little variation, but the frequent stops and tempo changes made the overall performance poor. Nevertheless, most of the evaluators rated the musicality and the stylistic awareness of melody phrasing and embellishment fair, whereas the other two criteria received a rating of poor.

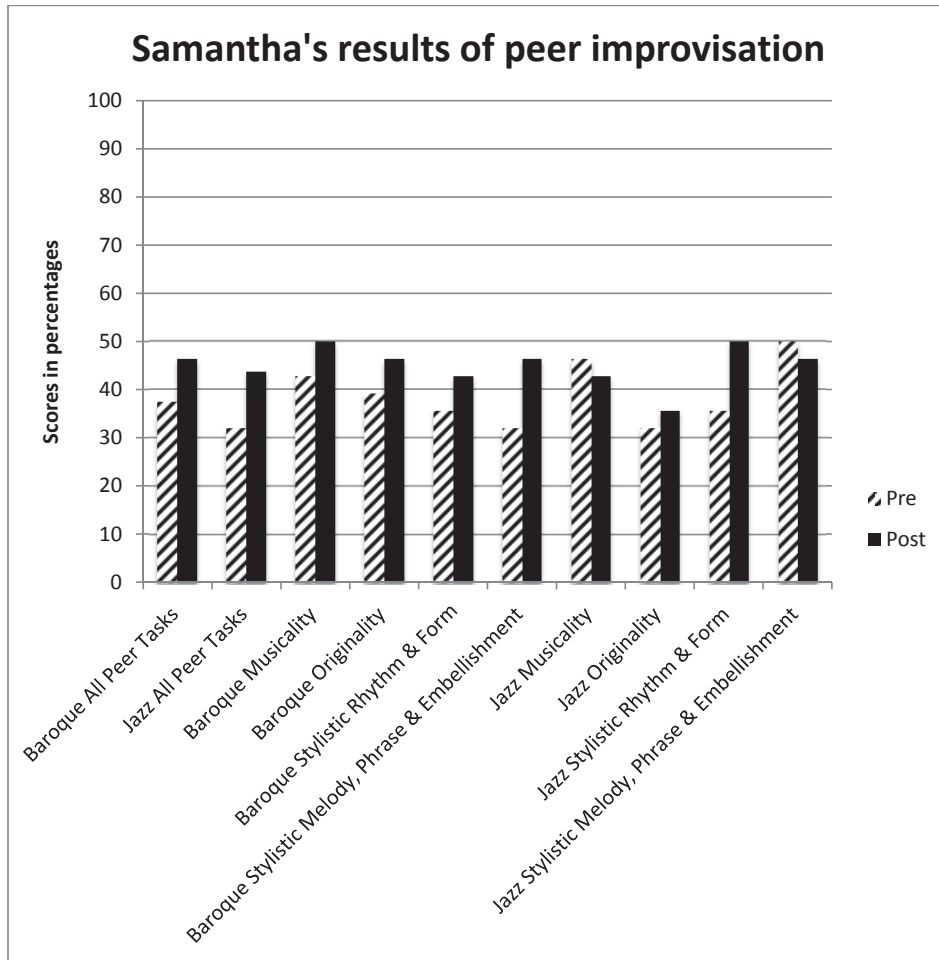


FIGURE 30A Samantha's peer improvisation test results

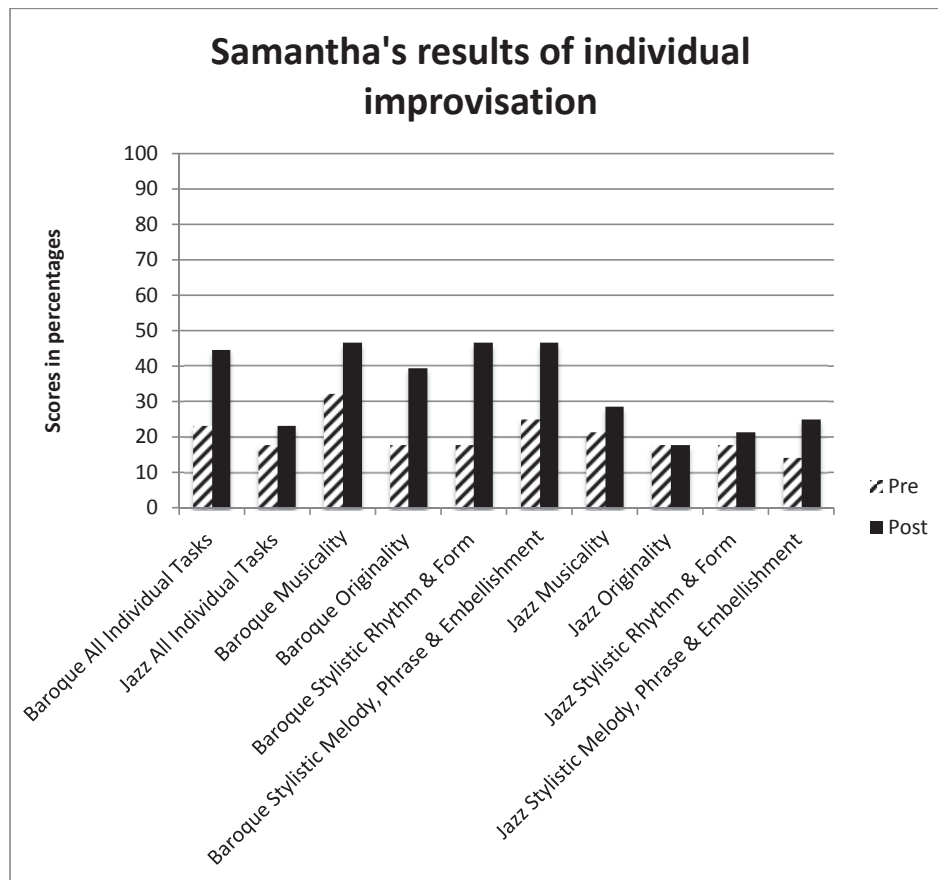


FIGURE 30B Samantha's individual improvisation test results

5.5.8.4 Samantha's overall progress and motivation behind learning harmony with and without improvisation

Samantha showed moderate improvement in both music theory and practical skills over the entire year. Her overall starting knowledge of harmony was at a moderately high level (60%) at the beginning of the course that was equally shared between the two genres. She showed solid knowledge in basic theory such as intervals, triads, and seventh chords in all three harmony tests despite the fact that she had learnt music theory only for a few years in her previous music education. She had excellent aural skills that she applied well in tasks involving recognising the basic harmony through listening. Her excellent skills in transcribing melodies could be seen by the results of her melody transcription tasks, especially in baroque. All of these achievements could be attributed to her extensive experience in solfège training. Samantha needed to learn the nomenclature of music theory and chord markings, especially related to the jazz,

and the extensions and the voice-leading technique. Her theoretical knowledge improved moderately over the entire year, quite similarly in the two parts of the course; however, during the first part, she seemed to have improved more in certain tasks related to baroque harmony, such as analysing baroque excerpts by Roman numerals. In the second part of the course, she seemed to have achieved slightly better scores in jazz theory, e.g. in identifying the chords and chord progressions either from the score, or by the lead sheet symbols or by Roman numerals through listening. However, her voice-leading technique improved at a slow pace during the whole course in both genres, especially writing the chord progressions from the figured bass or Roman numerals.

Her challenges in connecting the chords was reflected by the slower progress of her practical skills such as playing the various chord progressions in both styles on the piano. Her technical problems were due to her limited experience with classical and jazz piano, so her accompanying skills improved very slowly. Her ratings of the usefulness of playing-along exercises decreased during the course. In contrast, she appreciated the various singing and playing exercises very much, especially when she needed to play only one part of music. She specified this point in the FQ: *"I think both groups [both parts of the course] were good for my development. In the experiment group [improvisation phase], I got more playing skills, but the control group [first phase] gave me perhaps more knowledge. Or, actually, your teaching in both groups [both phases of course] gave me so much knowledge, that I cannot see any difference"*. Her limited piano-playing skills also affected her starting levels of improvisation in both styles especially alone, but this also was also due to her limited experience with these activities before the course. It seemed that this short improvisation phase of the course and her limited technical skills in playing the piano were not enough for her to improve her individual improvisation, since she found it difficult to express her ideas confidently.

In contrast, Samantha showed moderate improvement in melody improvisations with the accompaniment of peers in both styles. Especially, her baroque melody in the post-improvisation test with my accompaniment sounded much more fluent and musical than her melody in the pre-improvisation test. She also applied some of the learnt melody embellishments in her improvisation. In jazz, the stylistic feel of the rhythm and pulse improved the most, as observed in both her post-improvisation melody tests with my II-V-I accompaniment and during the lessons. Nevertheless Samantha was highly motivated to learn with improvisation. She felt that these activities definitely helped her learn harmony, as she stated in her comment in the FQ: *"Absolutely! It makes all teaching alive and motivates to learn. You somehow get a nice playing break, but you actually still practice the same things you studied before the improvisation break. Some things in [both] jazz and baroque harmony, you only learn by hands-on experience. That is how I see and feel it. And one addition: [to jazz] improvisation helps me to get into the jazz world and that helps me to create the harmonies to be studied. The same thing in baroque harmony"*. Furthermore, her rating of the usefulness of both individual and peer improvisation activities increased notably by the end of the improvisation part of the course in both baroque and jazz genres.

With regard to her aural skill development, she felt that piano improvisation was especially helpful: *“I got so many good tips for how to hear [to listen to], for example, the different intervals. And, at least, I progressed so much in my musical hearing by improvising that I really recommend it to others as well”*. However, she already had excellent listening skills at the beginning of the course. Furthermore, during the first phase of the course, her transcription skills improved to a very high level, especially in baroque, because of the various listening and transcription exercises. Her appreciation of the various melody transcription tasks increased during the first part of the course. Notwithstanding, in the second part of the course, the frequent melody improvisations on the II-V-I chord progressions could have contributed to her remarkable improvement in the jazz pattern transcription tasks.

Altogether, Samantha’s motivation for learning harmony was the improvisation in each genre rather than the combination of learning baroque and jazz material. She emphasized the usefulness of learning improvisation as well as its positive effects on her learning progress in general: *“I think this package that you gave us was important and useful, but I guess, one can teach with any kind of package these harmony things. Just don’t give up using improvisation! It was so nice and useful to learn in that way, and [to] learn to improvise as well”*.

5.5.9 Larry (Late IG)

5.5.9.1 Starting level of Larry’s knowledge and musical skills

Larry was a seventh year student in Music Education and student of Teacher Education. His main instrument was the piano that he learnt for ten years in classical style. He took piano studies in jazz for only one year. He had a less extensive background in music theory than in piano. He learnt classical harmony for one year and did not learn jazz. He took aural skills courses, such as sol-fège, for approximately three years. Furthermore, he had formal improvisation experience for only one year before the course including the exercises during the free piano accompaniment (vapaa säestys) basic course. Similarly, he had moderate informal experiences in piano improvisation, slightly more individually in the classical context than with peers and in jazz. He also remarked: *“I play mostly classical music ... Jazz music came to me when I started my studies in the university”*. He usually listened to hard rock, heavy or mellow jazz, and rarely classical or baroque compositions.

Larry achieved a good result in the pre-harmony test, i.e. 70%, equally shared between the two genres. He seemed to have had good basic theoretical knowledge in recognising the triads (baroque chords) and seventh chords (jazz chords) through listening and transcribing them into the score. He succeeded in both of these tasks equally, achieving a score of 82%. However, he had more problems recognising the augmented and diminished triads as well as the seventh chord qualities. He made similar mistakes in the chord transcription tasks. With regard to the stylistic knowledge in baroque, he left out the tasks of baroque chord progression analysis through Roman numerals and voice-leading

writing using the figured bass. The lack of figured bass knowledge was not too surprising since most students seemed to have had the same problem. He had similar problems using the Roman numeral system in the other tasks such as in the jazz II-V-I voice-leading writing and aural recognition. It seemed that the one year of classical harmony studies was not enough to help him deeply understand functional chord analysis. He was confident using the lead sheet symbols and could identify almost all the seventh chords from the written score even with the ninths and elevenths as well as with their alterations; 50% of all the seventh chords with extensions were also perfectly written in root positions in the score. Furthermore, he attempted to solve the II-V-I chord progression voice-leading writing task; he made some mistakes while identifying the roots of the chords according to the Roman numerals in the given keys. Nevertheless, his good basic knowledge of the jazz chords could be traced back his free piano accompaniment and the Music Education major studies. He seemed to have sufficient aural skills, evidenced by the fact that he succeeded in transcribing all three baroque two-part melodies almost perfectly (96%) and a part of the jazz pattern transcriptions (29%). This progress also could be connected to his extensive classical piano studies as well as his formal experiences in classical harmony and solfège. Overall, Larry's starting level was absolutely sufficient to learn the deeper stylistic features of both baroque and jazz harmony in such a combined course.

5.5.9.2 Increase in Larry's harmony knowledge during the course

The results of Larry's three harmony tests are presented in Figure 31. Larry's overall knowledge of harmony improved by 10 percentage points during the first phase of the course. He achieved a score of 80% in both genres. The tasks related to recognising and transcribing the basic triads by listening developed to 90% in baroque, whereas in tasks related to the seventh chords (jazz chords), he made slightly more mistakes. With regard to the voice-leading technique, he made remarkable progress, evidenced by his score of 75% for the baroque figured-bass writing task, a task he left out entirely in the pre-harmony test. It seemed that he quickly grasped this technique since he could also write the II-V-I chord progressions almost perfectly. In contrast, for identifying the chord progressions from the Roman numerals, he needed more time and motivation to progress. Unfortunately, he almost entirely omitted the baroque chord progression analysis as he did in the pre-test, but he wrote the chords from the lead sheet symbols. He only marked the first and last chords of the excerpt. In addition, in the aural recognition of II-V-I and cycle of fifths chord progressions, he achieved similar scores to the pre-test, marking only the II-V-I without specifying the quality of the seventh and the colourations. He worked out the jazz chords from the lead sheet symbols as well as he did in the pre-test, and he made a progress of 35 percentage points in identifying these chords from the score.

Nevertheless, he made notable progress in the melody transcriptions, especially in the jazz melodies, in which he achieved a score of 80%. Furthermore,

the baroque melody transcriptions were already at the excellent level in the pre-test; he transcribed all baroque two-part melodies perfectly (100%). Overall, it seemed that Larry established solid theoretical knowledge in order to deeply understand stylistic aspects of piano improvisation in both baroque and jazz genres.

Larry achieved excellent results in the post 2 harmony test. His score of 90% was shared between the two styles and the aural tasks, for instance transcriptions, and the theoretical tasks, like analysis and writing. He transcribed the three baroque variations perfectly (100%), and the jazz pattern transcriptions very well (80%). His knowledge of basic harmonic elements such as triads and seventh chords seemed to become very stable, evidenced by his score of 100% in baroque and 95% in jazz, e.g. aural recognition and transcription of basic chords. Larry made the greatest improvement in the voice-leading tasks, especially in the II-V-I chord progressions, perfectly writing the voices of the chords. In baroque, his voice-leading technique from the figured bass developed further (to 92%), in which he already made great improvement by the post 1 harmony test. It seemed that Larry gradually understood the relationship between theory and practice during the course, especially, the chord accompaniments and improvisation activities contributed to this knowledge. Another improvement could also be seen in his understanding of the role of Roman numerals, especially in the II-V-I chord progression voice-leading task and also in the baroque chord progression analysis (to 100%). Another important improvement was seen in his ability to recognise the II-V-I- and cycle of fifths chord progressions through listening, in which Larry improved by 30 percentage points since the post 1-test. He could recognise most of the II-V-I chord progressions with the learnt extensions, but he still omitted the tasks related to the extensions in the cycle of fifths chord progression.

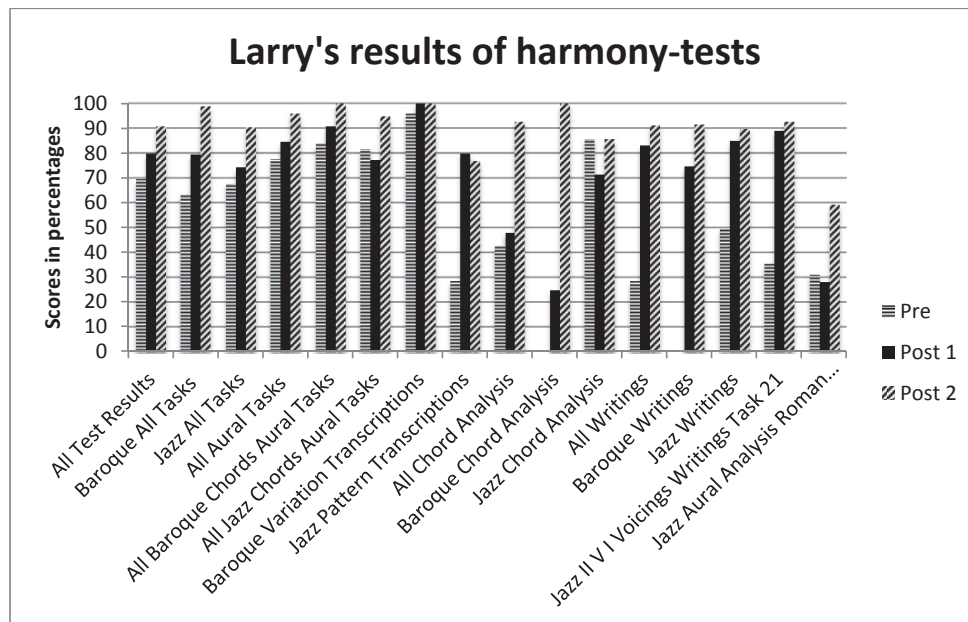


FIGURE 31 Larry's harmony tests results

5.5.9.3 Development of Larry's improvisation skills

The results of Larry's improvisation tests are presented in Figures 32 A and B. Larry performed equally well in his first peer and individual improvisation tasks. His first baroque melody improvisation test showed his good piano skills and stylistic knowledge in baroque style. These could be attributed to his ten years' classical piano studies as well as the development of his stylistic harmony knowledge during the first phase of the course. He improvised four variations on my chaconne bass and chord progression accompaniment in D minor in 3/4 meter. His theme sounded very good in terms of construction of melody, except the rhythmical solution that was not clear in the first motive as it started on the upbeat on the second beat. The development of the theme sounded much better both melodically and rhythmically. He very well applied the melody embellishments that we had learnt during the lessons in the first phase of course, i.e. various suspensions, anticipations, and trills. The rhythmic solutions were interesting, consisting of quaver motions and the chaconne pattern, combined with dotted rhythm. Especially, the syncopated rhythm of the last variation fit well with the baroque style. Larry also expressed the dynamics and colour of tone with care, particularly from the third variation. Overall, the evaluators rated the stylistic awareness of rhythm and form good, but the melody embellishment was rated higher. Moreover, one of the piano pedagogues, who was an expert in baroque music, rated the melody embellishment solutions and the musicality outstanding. Altogether, Larry's improvisation sounded very fine given his limited background in improvisation. He received good rates for

his first performance, and this was a good start for delving deeper in baroque melody improvisation.

Larry's individual improvisation sounded very original as well as excellent in musicality, which was confirmed by all evaluators. He improvised a theme and three variations on the i-V-VI-V chord progression, leaving open the final phrase on the dominant chord. He accompanied the melody with various chord figurations, playing mostly the octaves and fifths of the chords with the left hand in 3/4 meter, emphasizing the chaconne rhythm pattern. The most interesting solution was the construction of the melody with the right hand across different registers. He started the theme and first variation in a higher register that he moved one octave lower at the third variation and, finally, finished it in the higher register again. The melody was embellished with stylish ornaments such as trills and suspensions. The rhythmical solutions were simpler than those in the peer improvisation, but they fit well with the melody and were combined with the left hand figurations moving across the registers. However, the four evaluators had quite different opinions about Larry's melody solutions, but the stylistic criteria, the awareness of rhythm and form, and the melody phrasing and embellishment were rated very good. After Larry's first few promising performances, I was curious to see how he would be able to progress with improvisation either individually or with other musicians during the improvisation phase of the course.

While listening to Larry's first performance in jazz melody improvisation, my overall impression was that he sounded as if he had extensive experience and good skills in jazz improvisation. He improvised with ease and also sounded highly organised. He expressed his ideas with excellent musicality and originality and also paid attention to the swing rhythmical traits. The melodies combined various patterns of chord figurations and scale-like motives and were embellished by chromatic passing notes and slides. The evaluators seemed to have similar opinions about the stylistic awareness of melody phrasing and embellishment, rating it very good. Similar to the baroque pre-improvisation tasks, Larry confidently used the various registers of the piano that also enhanced the musicality of the performance. The rhythmical solutions were colourful and embellished with fine syncopations and stresses that fit well with the swing pulse. The evaluators seemed to have agreed on the excellent grade for the stylistic awareness of rhythm and form. Notwithstanding, the two aesthetic criteria received the highest rating. In addition, the two piano pedagogues rated the musicality and originality outstanding. Overall, Larry's performance received the highest ratings against all the criteria in the entire group, so I was interested to see to what extent he would be able to further develop his melody improvisation skills during the improvisation phase of the course.

Larry's individual pre-improvisation tasks on the II-V-I chord progression sounded as fine as his melody improvisation with his peers. While listening to his post-improvisation performance, I was convinced that despite his moderate experience in jazz improvisation and jazz piano studies, he is a very creative and skilled pianist. He expressed his ideas with a high level of musicianship

and rhythm feel. He improvised four variations of the II-V-I pattern, accompanying the melody with the seventh chords in the root position with arpeggios and other figurations with the left hand, which sounded slightly classical. He kept the tempo and swing pulse excellently, even when he stopped for a second at the beginning of the third variation. This stop was only because he misplayed the root of the Dm7 with G. As soon as he noticed it, he continued with the same tempo and pulse. Nevertheless, the melody was colourfully embellished with chromatic notes, such as slides and turns. The syncopated elements were combined with triplets and crotchets. The stylistic awareness of rhythm and form received very good rating. There was also a balance between short and long phrases combined with both hands in the various registers that highlighted Larry's good technical abilities. Overall, all the criteria were rated very good, except for originality that was rated slightly lower. Nevertheless, Larry could already apply many theoretical elements of jazz learnt during the first phase of course to his first performance, such as the II-V-I patterns and the swing rhythm. Therefore, I was interested to see how he would be able to develop his stylistic improvisation skills in jazz in the improvisation part of the course.

Larry was enthusiastic about improvising in all contexts, whenever he attended the lessons. Unfortunately, during the spring semester, his compulsory course overlapped with my harmony course; this affected his attendance and learning progress, especially during the first six weeks of the course. He only attended the lessons since the second half of the course; therefore, he missed many improvisation activities. I tried to consider his absence whenever I scheduled the improvisations in the lessons; however, at a certain point, I had to concentrate on the rest of the four students and their learning progress who attended the course frequently.

Larry could attend only one baroque improvisation exercise at the third lesson. Nevertheless, he participated in many other activities involving the baroque material during the first six weeks, but I regretted the fact that he had fewer opportunities to explore the stylistic improvisations in baroque than other students. The result of his post 1 harmony test showed that he progressed very well during the first phase of the course in terms of learning the stylistic features of baroque harmony, such as chord spacing and voice-leading technique. Therefore, I hoped that he would have sufficient time and possibilities to put this knowledge into the practice with other activities such as playing along the accompaniment with recorded music, listening to various elements of baroque variations, and improvising with the learnt themes and chord progressions.

During the first two lessons, we learnt a new chord progression through Pachelbel's Canon and explored the particular features of baroque harmony using the figured bass and Roman numerals. We explored the passing notes, suspensions, and other melody embellishments related to the given chord progression through listening, singing, playing, and playing along the recorded music and score. At the third lesson, we also started to improvise on this material in pairs, particularly focusing on the stylistic traits of the Canon but also

improvising it “free-style”. Larry improvised the melody with Jodie’s accompaniment. Jodie challenged Larry with her intro that had a much faster tempo than the melody played by the previous pair. She also played the intro in swing and slightly varied the bass, resulting in the chord progression I-V-VI-III-IV-I/V-IV-V. It seemed that Larry could easily cope with these changes, and he improvised five fine melody variations. Jodie continued to challenge Larry by changing the bass to a descending scale, resulting in the chord progression I-V6-VI-III6-IV-I6-IV-V. Larry played the first variation that sounded like a popular song that fit very well with Jodie’s comping style. In the next variations, he continued applying some of the melodies and embellishments that reminded me of the original Pachelbel variation. He was, however, a little inaccurate in terms of the rhythm because of the uncertainty of ideas at a few parts of the improvisation. Nevertheless, he adapted himself very well to Jodie’s dynamic tempo and also the slow down at the end. It seemed that they listened carefully to each other. The swing rhythm and Larry’s syncopations in the melody together with Pachelbel’s original phrases sounded very interesting, so the other students also liked this performance very much.

Unfortunately, there was no other video recording of Larry’s improvisations on other baroque material, such as the Foglia variations.

Larry performed all the jazz improvisation exercises from the sixth lesson onwards. During the first five lessons, we learnt the song Fly Me to the Moon and explored its extensions of the cycle of fifths and the II-V-I chord progressions. We listened to recordings and compared those to the lead sheet. We also played, sang, and transcribed the chord progressions at various positions and spacings. Finally, we practiced playing along the chord progression and theme of song with the recording and score. At the sixth lesson, we started to improvise melodies on the cycle of fifths chord progression in different keys, positions, spacings, and colourations, in pairs. Students also attempted to play the walking bass lines, some of them for the first time in their life. Larry improvised the chord accompaniment with the seventh chord on my walking bass and vice versa. Before he started to play the chord progression, he asked for the possible starting positions of the inversions of chords because he had not attended the previous lessons. I explained the possibilities and suggested he start with the root position as the simplest position of the seventh. He led the voices very well and played an excellent syncopated comping rhythm in swing. I was happy to observe that he not only understood the voice-leading technique since the post 1 harmony test but also applied it in the practice. Furthermore, I hoped that the practice would also deepen his theoretical knowledge. He also tried to improvise the walking bass line on my accompaniment that was more challenging than improvising the chords, so I let him choose a slower tempo. He had a very good start, but he wanted to play all the possible walking variants at once and was also moving across more than two octaves. He realised that this did not sound perfect, but I told him to continue. I encouraged him rather to listen to the misplayed notes and figure out the solutions by playing in a slower tempo than to stop the flow of music. Finally, I showed him how to apply the chro-

matic upper and lower neighbour notes and turns approaching the next chord's root. In the following exercise, he perfectly applied all of these elements in the walking bass line. He also followed my advice, repeating the notes while listening carefully to the sound of the chord and continuing only when he was certain of what to play. He also played a few rhythm variations combined with the dotted rhythm that sounded very fine.

By the eighth lesson, Larry showed notable improvement in playing the accompaniments of the cycle of fifths in various positions and inversions, leading the voices correctly. By that time, we also explored the II-V-I chord progressions with extensions in different contexts using the song *Take the A Train*. Larry improvised the II-V-I accompaniment with seventh chords and extensions in various trios. He seemed to have been confident playing the role of the leader in each group, keeping an excellent tempo and varying the rhythm creatively. This especially helped those students who were more in the experiment stage, improvising either the melody or walking bass. Larry also made remarkable improvement in improvising walking bass lines with other students' melody and chord accompaniments. He confidently applied the learnt chromatic non-harmony notes to the improvisation that made the walking bass very colourful. He also kept an excellent tempo and played fine rhythmical variations. Whenever he misplayed something, he corrected the notes very creatively, for instance, by either repeating the chord notes or jumping to those notes that fit more with the given chord. Larry seemed to have been motivated to learn these techniques since he was most interested to learn jazz as compared to baroque. He emphasized this in the FQ: "*... I found /learning/ jazz harmony more useful.../than baroque/...*".

At the last lesson, Larry confidently played both the chord accompaniment and walking bass for *Take the A Train* with Pamela and me. He applied all the learnt elements of music, e.g. chord spacing and voice-leading, to his comping. His walking bass also improved remarkably. He improvised the melody in trios a few times during the lessons, for instance, at the eighth lesson, on the II-V-I chord progression. He played very fine melodies at the beginning in terms of chord figurations and other melody embellishments; he seemed to have been focusing on his own melodies and developing various existing patterns. Therefore, I was curious to see how he would react to my melodies. I joined the trio unexpectedly and played melodies in a call-and-answer manner with the other two students' accompaniment. Larry listened carefully to my ideas and developed them very well. He complemented my melodies with very different material, for instance, contrasting short melodies with long melodies or syncopations with crotches etc. He also creatively used various parts of the theme of *Take the A Train*. The greatest turning point of his learning progress was the last lesson when he improvised melodies alone with my II-V-I accompaniment and with Pamela in a call-and-answer manner. We explored various tempos and characters such as swing or ballad in slow rubato. He copied and developed both my and Pamela's melody ideas excellently. We also improvised very short melodies that sounded very original. In addition, he applied many of

the melody embellishments and ornaments that we listened to and played during the lessons. The last minutes of the video recordings showed remarkable musical moments in Larry's melody improvisation in the trio with Pamela and me.

Larry's opinion about the usefulness of the improvisation exercises improved very much during the improvisation phase of the course, especially regarding jazz both with peers and alone. On observing his performances of various improvisations during the second half of the course, I was convinced that despite his absence at some of the lessons, he developed many techniques in improvisation, his practical skills, aural skills, and musicianship to a high level.

While listening to Larry's post-improvisation melody with my chaconne accompaniment, I noticed that despite of his limited participation in the baroque improvisations during the improvisation phase, he showed good improvement. For his theme, he used the opening phrase of theme of the Foglia variations and developed the melody over three variations that finally closed on the tonic. He consciously applied the various melody embellishments such as suspensions and chord figurations that we learnt. He improvised fine turns, ornamenting the various chord notes that reminded me of the Foglia variations. The fine ornaments also contributed to the quality of rhythmical expression that was rated very good by the evaluators. Altogether, he improved in all the criteria that were rated very good overall.

Larry maintained his standard when improvising individually on the given chord progression. He played a theme and three variations keeping the 3/4 meter, based on the learnt Foglia variations. The theme started with chord arpeggios, both up and down, that continued with fine ornaments. He developed this idea well over the next three variations, accompanying the melodies with his left hand simply playing the chords on the first beats of the bars. He finished the whole musical idea with a short melody arpeggiating the tonic chord, but this closing phrase sounded as if he was a little hesitant to continue. Nevertheless, he expressed his musical ideas with care in terms of dynamics and colour of tone. The rhythmical solutions were also colourful, consisting of, mostly, quavers and crotchets, but the ornamentation was combined with semiquavers, triplets, and turns. The evaluators rated all the criteria very good.

Larry performed differently in his jazz post-improvisation tasks. His performance in the jazz melody post-improvisation test was rated very good, overall, by the evaluators, slightly lower than the rating of his pre-test performance. This difference did not necessarily imply a drop in his stylistic improvisation skill level because, among all the students, his previous performances received the highest rating in all the criteria. His four melody variations sounded musical and consciously constructed in terms of melody and rhythm. In the first two variations, he tried to apply the various learnt patterns based on the chord notes we learnt during the lessons, making his variation sound slightly less original than his first improvisation at the beginning of the improvisation phase. Nevertheless, he developed these ideas further by combining the short melody phrases with slides and chromatic passing notes. The melody embellishments

also affected the rhythm and sounded very colourful. The syncopation at the last variation sounded slightly inaccurate but sounded very original in terms of melody. Overall, Larry's performance in the post-improvisation task was very good, and he seemed to have established good basic skills in jazz improvisation.

Larry's individual post-improvisation performance received much lower ratings than his previous improvisations. However, while listening to his improvisation on the II-V-I chord progression, I noticed that he eagerly tried to apply certain theoretical elements of harmony we learnt during the course as well as tried to employ the improvisation techniques that we explored at the last lesson. This affected his performance that indeed sounded much more uncertain and exploratory than his pre-test performance at the beginning of the improvisation phase. He improvised four variations in slow rubato tempo in ballad style. He played the chords of II-V-I with the sevenths, concentrating on the proper voice-leading. He arpeggiated only the tonic chord during the first two variations but during the third, he played all the chords in arpeggios. However, he did not change the position and the inversions of chords and the whole chord progression remained in the same register, making the entire music piece sound slightly flat, compared to his pre-improvisation tasks in both genres. With regard to the melodies, he improvised mostly chord breaks and embellished the theme with slides and chromatic passing notes that sounded very fine. However, he also slightly overemphasized improvising only short melodies that we explored in the last lesson. This could not have been a problem had the short phrases not broken the flow of the melody line. Nevertheless, his performance was very musical, and the evaluators rated the musicality higher than the other criteria. This difference between the ratings of the pre-improvisation performance (excellent) and the post-improvisation performance (good) did not imply that Larry's skills declined during the improvisation phase. He attempted to apply many of the musical elements that we explored during the lessons.

It is also important to note that on the following day of the last lesson, Larry had to give an advanced examination including the post 2 harmony test and all post-improvisation tests, because he was moving to another town for his new job. These stressful circumstances as well as the very last impressions of various improvisation exercises altogether influenced his final improvisation performances.

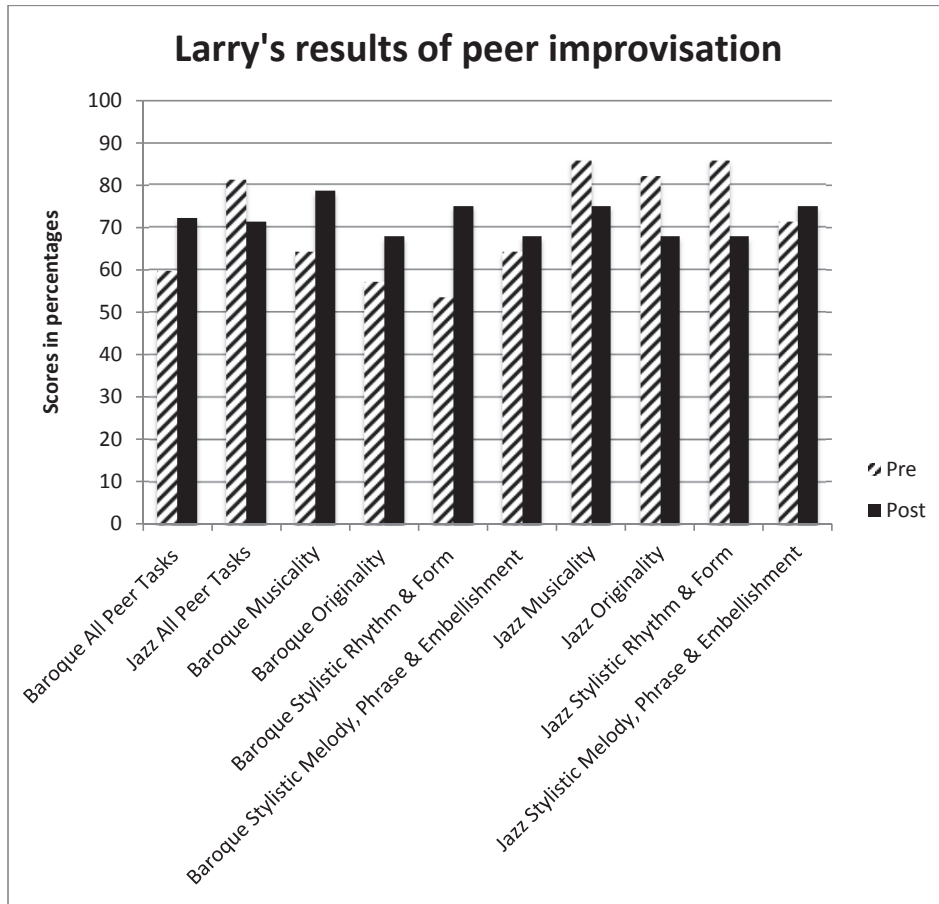


FIGURE 32A Larry's peer improvisation test results

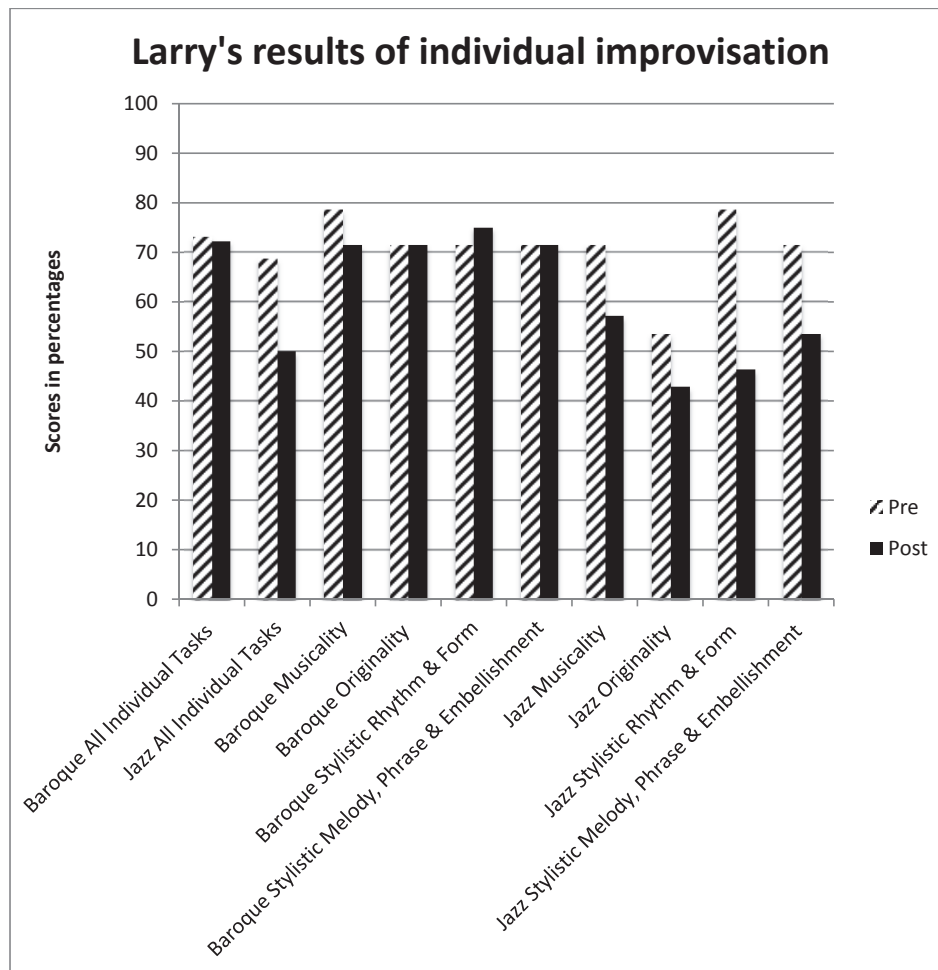


FIGURE 32B Larry's individual improvisation test results

5.5.9.4 Larry's overall progress and motivation behind learning harmony with and without improvisation

Larry's knowledge of music theory gradually improved over the year to a notably high level. He had very good basic knowledge and aural skills that could be attributed to his previous aural skill studies as well as the seven years of music education studies. His classical piano background also established a solid foundation to understanding the baroque harmony as well as baroque melody transcriptions. There were few differences between the improvements related to different aspects of the course. His performance in certain theoretical tasks, such as writing the chord-spacing in jazz and chord progression voice-leading from the figured bass, improved more quickly during the first part of the course,

whereas his performance in other tasks, such as baroque chord progression, Roman numeral analysis, and the aural recognition of jazz chord progressions improved more in the improvisation phase. He had a less extensive background in jazz than in classical music, so despite his good basic knowledge, his stylistic knowledge improved at a slower pace in jazz, mostly during the improvisation phase of the course. He also thought that his stylistic knowledge improved more with improvisation: *“Learning by doing. ... There were much more actual things to try ... (instead of just listening and trying to remember at home)...”*. Moreover, he emphasized that this was especially true in jazz: *“... even more than baroque harmony”*. These remarks were also confirmed many of my observations during the lessons. I noticed that he grasped all kinds of theoretical elements related to harmony very quickly whenever we explored them on the piano and applied them in the improvisation tasks either in pairs, trios, or alone. Improvisation helped him understand and learn harmony and supported his aural skills: *“Yes ... it’s a really strong impulse to remember.”*

His practical skills seemed to have improved to a high level, but I had observed during the first part of the course that he had excellent piano and aural skills. His pre-improvisation performances also showed remarkable musicianship, original ideas, excellent rhythmic feel, and fine stylistic knowledge. It seemed that his motivation to learning harmony with improvisation as well as the good starting level of improvisation enabled him to delve deeper into stylistic improvisation. The video observations showed his gradual improvement in jazz, but in individual improvisation, he performed slightly less well later than at the beginning of the improvisation phase. Owing to changes in his professional life, he had to complete the exams earlier; also, he was absent for the first few lessons. Therefore, the slow pace of his learning progress in jazz harmony could be attributed to the mentioned factors. Nevertheless, he began to highly value the sing and play exercises and play-along activities in jazz by the end of the year.

Overall, Larry was definitely motivated to learn harmony with improvisation, especially in jazz: *“It offers an opportunity to try some ‘own things’... and [it] supports learning very much!”* Furthermore, he appreciated the idea of learning the two genres together, as he explained: *“They support each other somehow, but still I found jazz/pop harmony more useful”*.

5.6 Results, (part B): Main findings regarding the use of improvisation as a functional pedagogical tool for the combined teaching of baroque and jazz harmony

In this part of the dissertation, I present the main findings in 14 sections, as specified below.

Section 1 presents the students' formal and informal background education and their starting level of harmony knowledge and aural skills, based on their performance at the pre-harmony tests.

Section 2 specifies the stylistic, theoretical, and practical knowledge that the students could apply in the pre-improvisation tests, in which all students' (from both Early and Late IG) existing knowledge and musical skills and the Late IG students' development in harmony knowledge and musical skills acquired during the first phase of course (without improvisation) were taken into account.

Section 3 presents students' different motivations behind learning both baroque and jazz harmony with improvisation based on their comments in the FQ.

Section 4 summarises the benefits and challenges of improvising with peers during the lessons.

Section 5 discusses how the accompaniment technique affected the peer improvisation exercises, the development of theoretical knowledge, and aural skills based on mainly the lesson observations (video recordings) and the post-harmony tests and supported by the students' answers from various questionnaires.

Section 6 reports how the various approaches to melody improvisation (melody and bass variations), copying technique, and question and answer exercises contributed to the success of peer improvisation exercises, and the development of students' baroque and jazz stylistic knowledge, theoretical knowledge, and aural skills.

Section 7 discusses which part of the teaching material (both baroque and jazz) was successful in helping students learn harmony with improvisation and what kind of materials students preferred in their improvisation tasks during the lessons and in their improvisation tests.

Section 8 reports how beneficial it was to learn the two styles together in the combined harmony course, principally based on the students' opinions expressed in the FQ.

Section 9 discusses the benefits and challenges involved in learning harmony with improvisation in the group setting, in particular, how students with various knowledge and musical skills were able to improvise together.

Section 10 reports the benefits and challenges involved in using play-along recordings supporting improvisation activities observed in the lessons.

Section 11 reports the effect of various peer improvisation exercises on the development of individual improvisation skills based on the results of students' post-improvisation tests.

Section 12 reports the effect of various peer improvisation exercises on the development of melody improvisation skills with peer accompaniment based on the results of Late IG students' post-improvisation tests.

Section 13 discusses how the harmony knowledge and aural skills developed with and without improvisation over the course and how the other music activities contributed to the learning process.

Section 14 summarises the overall progress and motivation behind learning harmony with and without improvisation over the whole course, based on students' opinions from the FQ.

5.6.1 Students' education background and starting level of harmony knowledge and aural skills

The findings indicated that students with diverse music backgrounds participated in the course. Overall, they had more extensive formal education in classical music (average, 5.2 years) than in jazz (average, 1.2 years). The amount of time the participants had spent learning classical harmony before the course ranged between 0 and 12 years, while for jazz harmony it was only between 0 and 5 years. This disparity was also apparent in the duration of piano and solfège studies, with the duration for classical piano ranging between 0 and 20 years and of jazz piano, between 0 and 6 years. Students also had different durations of solfège or ear-training, which ranged between 0 and 15 years. Furthermore, four of the Finnish students had also taken the free piano accompaniment (*vapaa säestys*) courses at the basic or advance level at the university before the current course (Figure 33).

Students' performances at the pre-harmony test showed very different starting levels of knowledge of baroque and jazz harmony and aural skills. A general relationship could be found between most students' starting scores of both baroque and jazz genres and their previous music education. Generally, most students performed better in tasks related to baroque harmony than in those related to jazz, and the performance in various tasks contributed to the overall starting scores for each genre.

Regarding the techniques related to classical music theory, most students (Harriet, Melanie, Elliot, Pamela, Kathleen, and Jodie) appeared to have been familiar with the Roman numeral system that could be employed excellently into the baroque excerpt analysis from the score. All of these students studied classical harmony for at least three years, except Jodie, who may have acquired this knowledge through other studies, for instance, solfège and free piano accompaniment training, or during 20 years of playing the accordion. Other students left out this task entirely in the pre-test. However, most of the students who learnt classical harmony for many years, even Elliot, who studied it for 12 years, completely omitted the tasks of chord progression writing from the baroque figured bass. It came to light at the lessons that most students (some of the even remarked this at the harmony test) had never learnt the figured bass or never used it as a keyboard accompaniment, so even though some of them were familiar with the voice-leading technique, they could not realise the chords from the figured bass. Harriet and Kathleen were exceptions. Harriet, who also was already familiar with the teaching material, achieved the most outstanding result since she participated in the harmony course of the pilot study, whereas Kathleen, who participated in the course as international exchange student remarked "*...I was trained classically and I am more familiar with baroque*". Nevertheless, most students' extensive classical harmony studies could also be seen in

the excellent achievements (more than 85%) in recognising and transcribing the basic theoretical elements such as intervals, triads, and seventh chords in all positions. Despite her background, Kathleen seemed to have more problems identifying these elements of music theory (60%) and transcribing them (with even poorer results).

Students' basic jazz theory knowledge in terms of basic seventh chords with particular extensions and additional notes was sufficient, despite the fact that most students had spent notably less time learning jazz than classical music. Elliot seemed to have been an exception, as he had an extensive jazz background, especially jazz theory. Nevertheless, most students seemed to have been familiar with the lead sheet symbols that helped them identify the basic jazz chords (seventh chords without extensions) from the written score and write them into the score from the chord symbols. The basic jazz theory knowledge and familiarity with chords symbols of the Finnish students (Harriet, Pamela, Jodie and Larry) could be attributed to the fact that they took the free piano accompaniment (*vapaa-säestys*) course, and the curricula the free piano accompaniment training in the Finnish higher music education is based on the practical use of basic harmony mainly from lead sheet chord symbols.

The students' informal learning experiences also seemed to have contributed to their success in either recognising the jazz chords from the score or writing them from the chord symbols: for instance, Jodie had extensive (20 years) experience playing the accordion both alone and accompanying other musicians using mainly the chord symbols. Furthermore, Melanie, neither learnt jazz in the formal education context nor learn free piano accompaniment; she commented the following in my email questions: "... I do a lot of piano accompaniment to Christian hymns at student meetings, ... [playing] pop songs both with guitar and piano". Also, she remarked that she "...[played] some jazz standards" in her spare time.

The two international students, Kathleen and Zack entirely left out the jazz theoretical tasks because they had not learnt free piano accompaniment, jazz theory, or piano before the course and had no notable informal experiences in learning jazz.

The least completed jazz task among the students was writing the II-V-I chord progressions both in major and minor keys from Roman numerals and giving their positions. Only Harriet and Elliot were able to perfectly complete this task, which required not only solid theoretical knowledge in jazz but also the familiarity with the Roman numerals and the proper voicing and voice-leading technique. The voice-leading knowledge could have been stemmed from students' existent knowledge in classical music theory or from the piano accompaniment training, but without the proper knowledge of jazz theory, most students attempted to write only the chords without the correct voice-leading or left out this task entirely. The aural recognition of jazz II-V-I and cycle of fifths chord progressions with sevenths and extensions by Roman numerals showed even varied results than the II-V-I writing task. Only Harriet, who appeared to be the most skilled among all of the students and was familiar with the course material, succeeded in recognising almost all the chords with

colourations. Whereas Elliot, who had the most extensive jazz theory studies could manage to identify the chords without colourations. Similarly, Melanie performed the task successfully even though she had never learnt jazz theory formally. Pamela and Samantha showed a promising start by at least figuring out the correct Roman numerals of the chord progression. Students needed to know these chord progressions and the chords with extensions and colourations and also needed to have good aural skills to recognise them by Roman numerals; therefore, this task showed the weakest relationship with the students' previous education.

Good aural skills and experiences in the transcription technique also influenced the starting scores of melody transcription tasks in both genres, such as the outstanding results of Harriet and Melanie. Likewise, Zack, who was the least experienced student of all, performed poorly in transcription tasks. Samantha had moderate theoretical knowledge, but her extensive solfège background appeared to have helped her perform very well in the melody transcriptions in both styles. However, the achievement in these tasks was not always due to the students' previous formal solfège training. For instance, Kathleen, who had 10 years' aural skills training before the current course, performed poorly in melody transcriptions in both baroque and jazz styles. Similarly, Elliot could not perform the jazz pattern transcription task perfectly; however, he had experience in both jazz and solfège. Nevertheless, he excellently transcribed all three baroque variations. These findings indicated that besides sufficient aural skills and theoretical knowledge, students need to have good training in the transcription technique.

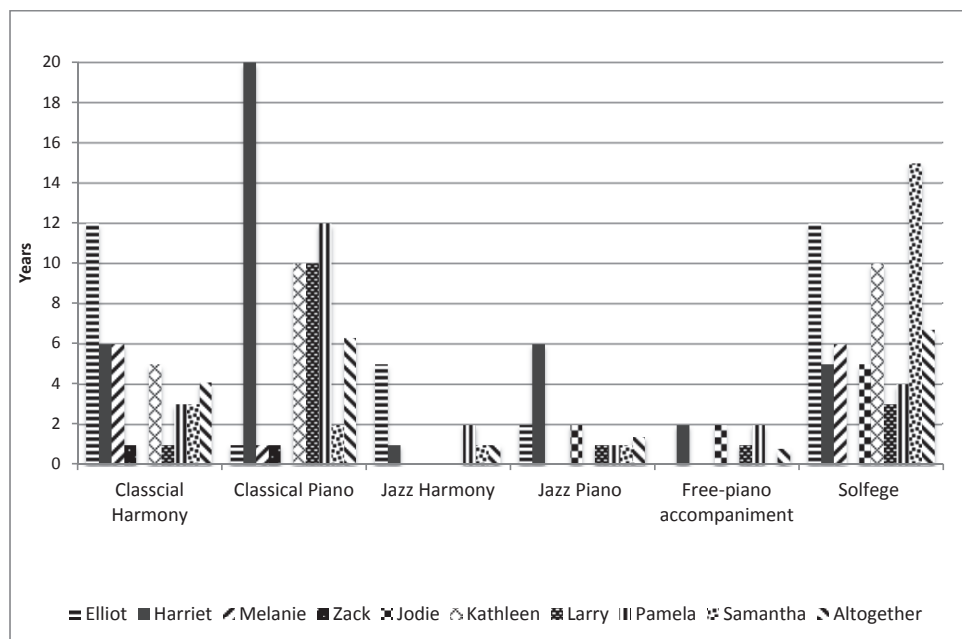


FIGURE 33 Students' previous formal music studies in years

Overall, the findings suggested that students started the course with very different levels of knowledge and skills that generally reflected their previous education. The diversity in the adult students' skill levels, which is considered to be a well-known phenomenon in tertiary education, affected the learning progress of each student. Notwithstanding, despite students' different music background, most students' knowledge in harmony and aural skills revealed to be sufficient enough for learning both baroque and jazz harmony in such a combined course.

The students' learning process, however, depended on their existent practical skills, such as improvisation skills, technical ability to play the piano, their stylistic knowledge of both baroque and jazz, and the timing of the various improvisation activities. The effect of improvisation-based activities on the students' harmony knowledge and aural skills were examined in two parts of the course, i.e. non-improvisation and improvisation phase; the starting levels of students' improvisation skills were also tested in the two parts of the course: for Early IG students at the beginning of the year, and for Late IG students at the second part of the course.

In addition, the Early IG were given the simpler tasks of improvising in Dm and C chords alone on the piano in both baroque and jazz, whereas the Late IG were given more complex chord progressions, i-V-VI-V in baroque and Dm7-G7-CMaj7 in jazz, and were asked to improvise only the melody part with the teacher's accompaniment and alone with two hands.

5.6.2 What knowledge could the students apply in their first improvisation tests?

Students' pre-test improvisation performances depended on their stylistic knowledge of both baroque and jazz, piano skills, experiences in improvisation, and their existing theoretical knowledge. Students also brought stylistic knowledge from various other musical genres to the course from their formal and informal education, evidenced in their pre-improvisation test performances. This, however, was even more evident in the case of the Early IG students' first improvisation performances, since they started the course with improvisation.

Melanie's first baroque improvisation performance showed her extensive stylistic knowledge, which could be attributed to the 12 years of her violin studies and 2 years of formal improvisation training as a part of her violin studies. In contrast, since she had an absolute lack of formal jazz education, her jazz improvisation seemed to be strongly influenced by folk or popular music, in which she had extensive experience, as she regularly accompanied popular repertoire with other musicians in various informal settings.

Harriet seemed to have had solid stylistic knowledge of both baroque and jazz in terms of expression of form, use of chords, rhythm, and the construction of melody. She was also the most experienced musician the group, as she had extensive experience (15 years) of piano improvisation and had also taken the free piano accompaniment course at the advanced level. However, since she studied classical piano for 20 years and jazz for 6 years, her baroque improvisa-

tion sounded even more matured than her jazz improvisation. The rhythmical ideas were simple consisting of crotchets and quavers, but they were in perfect harmony with the chord and melody. Overall, her entire performance sounded like a consciously planned composition. She also explained the following in the email questionnaire: “... *At music school, I played quite a lot baroque music on the piano as it was part of the curriculum. So, I heard a lot of baroque music. I also listened to it a lot since I like it and I still do if I have the choice*”.

Elliot’s first improvisation performances in both styles were perfectly in line with his music education. Elliot’s main instrument was the drum; he learnt jazz theory for five years and jazz piano for two years. Nevertheless, he also had an extensive classical background as well as five years’ formal improvisation training in various genres. His proper stylistic knowledge in baroque could be heard, for instance, in the way he used the dotted rhythm in the melody. He also improvised the musical sentences in the question-answer mood similarly to the baroque-classical periodic form. However, he improvised in jazz with much more confidence and ease than in baroque by expressing his excellent feel for rhythm and pulse with fine syncopations. It appeared that Elliot was “at home” playing jazz.

Even though Zack had no jazz background and formal improvisation training on the piano, he used his limited classical piano experiences in the baroque improvisation tasks. He studied both classical piano and classical harmony only for one year before the current course, but he managed to play the Alberti bass properly with the left hand accompaniment in the baroque pre-improvisation test.

The differences between students’ existing classical and jazz theoretical knowledge could be heard in their first improvisation. The two students, Harriet and Elliot, who had more knowledge and formal studies in jazz (either playing the piano or music theory) extended the Dm and C chords with the seventh. In addition, Elliot went to the sixth of the chord C at the end of improvisation, which resulted in the C6 as the tonic chord.

Whereas Melanie, who had never learnt jazz in the formal education context, she seemed to have creatively applied her theoretical knowledge from her classical education in both improvisations. For instance, it seemed that she accidentally played the B flat major chord on the seventh bar as the subdominant chord before the C major (dominant) and Dm (tonic) indicating her proper functional knowledge. In the jazz pre-improvisation tasks, she applied the same functional extension by finishing the musical sentence with the full close.

The fluency and musicality of the first performances were found to be connected to the students’ levels of piano skills and the experiences of improvisation in the formal and informal education contexts, especially evidenced by Harriet’s excellent performance and Zack’s frequent stops and hesitations formulating his musical ideas.

However, there was a link between students’ previous music education, especially in terms of years spent learning piano and improvisation and their pre-improvisation test, students’ informal playing habits, and experience im-

provising either alone or with other musicians also contributed to their first performances. Melanie's comments in the email questionnaire could explain her good performance in the jazz pre-improvisation: "...I do a lot of piano accompaniment to Christian hymns at student meetings,... [playing] pop songs both with guitar and piano".

With regard to Late IGs, even though their background of music education seemed to have influenced their first improvisation performances, the development of their theoretical knowledge and various musical skills over the first phase of the course (without improvisation) also contributed to their success in the pre-improvisation tests. Some of the students could use certain stylistic elements we had learnt during the non-improvisation phase of course in the pre-improvisation tasks.

For instance, Larry's first improvised baroque melodies in the peer pre-test were well-structured and full of the embellishments such as suspensions, anticipations, and trills that we had learnt during the lessons. The rhythmical solutions were also interesting consisting of quaver motions combined with dotted rhythm and syncopated rhythm patterns. Especially, the syncopated rhythm of the last variation fit well with the baroque style. Larry could also apply certain ornaments to his individual performance. However, the rhythmical solutions were simple, and they sounded in harmony with the left hand figurations, which smoothly moved across the registers. The good level of technical ability could be attributed to the fact that he had learnt classical harmony for 10 years, but he seemed to have had solid baroque harmony knowledge, as evidenced in his pre-harmony test. Furthermore, the improvement in his theoretical and stylistic knowledge during the non-improvisation phase provided a good basis for the success of his first improvisation performances. Given the fact that he studies jazz piano for one year and had improvisation experiences for one year in both formal and informal settings, his performance was livelier in the jazz pre-tests, both with peer accompaniment and alone. His improvisations sounded highly organised and original and were expressed with excellent musicality. In the melody improvisation, he also paid attention to the swing rhythm and syncopations and combined the various chord figurations with scale-like motives and embellished it with chromatic passing notes and slides. His stylistic knowledge might have improved because of his regular listening habits and listening and transcription exercises during the first phase of course, which could be also be seen in his remarkably improved jazz pattern transcription at the post 1 harmony test.

The improvement in Jodie's baroque and jazz stylistic knowledge of harmony and the aural recognition and melody transcription tasks in both styles also established a solid ground for her performance in the first improvisation tests. She could already apply many of the learnt stylistic embellishments, such as turns combined with upper and lower neighbour notes, in the baroque melody improvisation test. She also embellished the jazz melody with a few slides in the pre-improvisation test, which however, could be mainly attributed to her 15 years' experiences playing and improvising on the accordion in various

styles such as folk, classical, and pop. Nevertheless, her accordion background, two years' jazz piano studies, and free piano accompaniment studies could be connected to the fact that she could express her ideas much better without my accompaniment. Therefore, the individual improvisation test performances sounded generally much more musical and livelier than those of her peers. The baroque improvisation was carefully built up in terms of the melody line, starting with a chord figuration in quaver motion as a theme, followed by various fine chord figurations. Meanwhile, in jazz, she kept a good tempo, accurate rhythm, and phrasing as well as played very colourful melody embellishments such as slides, chord arpeggios, or turns combined with seventh chord figurations.

Pamela and Kathleen had extensive classical piano background and in baroque, still, similar to Jodie, they expressed their ideas more freely individually than when improvising melodies with peer accompaniment. They also seemed to have relied more on their own original ideas at the pre-improvisation tests. For instance, Kathleen improvised in 6/4 meter in the baroque individual pre-test. Pamela also applied different meters we had explored the baroque variations during the lessons as she played in 6/8 and also improvised the chromatic embellishment that resulted in the Augmented 65 chord (German 6). However, Kathleen had never learnt jazz, and this was evident in her performance where she had problems formulating musical sentences on the II-V-I chord progression. Whereas Pamela, who studied jazz piano for a year, free piano accompaniment at the advanced level, and had informal experiences in jazz improvisation seemed to be more skilled at improvising the II-V-I chord progression alone. She also showed her outstanding piano skills and musicality, as she formulated her theme with fine arpeggios of the chords shared between both hands, confidently using various registers.

Nevertheless, students seemed to have attempted to apply the elements of theory to the first improvisations that they had learnt during the first phase of course. For instance, Kathleen and Samantha perfectly used the harmonic minor on the baroque chord progression, with which they had problems both playing and recognising aurally at the beginning of the course. Meanwhile, the progress in recognising the II-V-I chord progression by listening and working it out in writing with the proper voice-leading could be heard in Larry and Pamela's jazz melody improvisation. Larry improvised various chord figurations on the II-V-I, while Pamela seemed to have borrowed the sequential melody from the II-V-I chord voice-leading realisations with the ninths that we explored and practiced at the lessons. With regard to individual jazz improvisation, both of them showed excellent piano skills; however, their use of II-V-I chord progression in terms of chord positions and voice-leading sounded still more "classical". For instance, Larry accompanied the melody with various chord figurations, but used the seventh chords in the root position and close position. Similarly, Pamela's last rubato motive reminded me of the classical opuses closing the musical texture from the dominant seventh to the tonic. These points indicate that the students attempted to apply their theoretical knowledge to the pre-

improvisation tasks, and the stylistic and practical knowledge of harmony in jazz piano improvisation needed to improve.

Unfortunately, the lack of proper piano skills negatively affected Samantha's first improvisation tests. However, she learnt classical piano for two years and jazz piano for almost a year, but because of the lack of technical skills, she could not express her musical ideas properly on the piano, as compared to other students. She also had adequate experiences of improvising in informal settings mostly alone and had problems playing the chord progressions during the first phase of the course. Furthermore, because she did not have extensive knowledge in music theory, she concentrated hard to grasp certain theoretical elements and techniques during the first part of the course. Nevertheless, she seemed to have had excellent aural skills as she carefully tried to correct her uncertain improvised melodies. The pre-test and post 1 harmony test also showed her good aural abilities, since she performed better in all aural tasks, including melody transcriptions, than in the writing or score analysis tasks. Samantha could express her ideas in both baroque and jazz melody pre-improvisation tests. Furthermore, she tried to express the melodies taking care of the dynamics and colour of tone.

Notwithstanding, the level of each student's piano skills influenced his/her expression of musicality. This could be observed principally in the cases of Pamela and Jodie, who appeared to have been the most sensible musicians in the group. Their technical abilities and experience in playing, improvising, and accompanying on the piano enabled them to express their ideas with a high level of musicality, for instance, the confident use of registers the various chord figurations in their individual improvisation influenced the musicality of performances.

Overall, it could be seen that despite the various piano and improvisation skills, which were acquired from both formal and informal education contexts, all students of Late IG could already apply certain learnt theoretical and stylistic elements of music in their pre-improvisation tests from the first phase of the course. Furthermore, the first improvisation test performances of most students from both groups showed a promising start to deepening their understanding of the stylistic elements of improvisation in the improvisation phase.

5.6.3 Motivation behind learning harmony with improvisation

Since the students voluntarily participated in the course, which aimed to explore the role of improvisation in learning baroque and jazz harmony, they were motivated to learn with improvisation. In the following comment in the FQ, Samantha explained: *"It [improvisation] makes all teaching alive and motivates to learn. You somehow get a nice playing break but you actually still practice the same things you studied before the improvisation break. Some things in [both] jazz and baroque harmony you only learn by hands-on experience"*.

However, the timing of the improvisation exercises as additional music activities in the course differently motivated the students both for learning harmony and improving their various practical skills. The findings showed that

those students, who had solid theoretical knowledge, sufficient piano skills, and more formal and informal experiences of improvisation benefited more from the improvisation activities in the first part of the course, than those students who lacked the theoretical knowledge and practical skills. The students with more knowledge and musical skills could apply their skills and knowledge more easily to both baroque and jazz improvisation exercises, especially with peers.

For instance, for Harriet, who was the most skilled in all terms of the group, the current course seemed to have been a kind of routine to keep her knowledge fresh: *"the improvisation tasks were more like a kind of eye-opener: they helped me notice how many possibilities there are and that I should explore the world of scales better in order to be able to use them". ...it [piano improvisation] helps to get familiar with the chord progressions and the fitting scales and notes"*.

Whereas Elliot, whose main instrument was the drum and had solid jazz background, could especially focus on the improvisation technique: *"...once you get into the improvisation, you may spend more time experimenting the phenomena. When you come up with your own ideas in different contexts, the learning experience is stronger, I believe"*.

At the same time, those students, who had lacked theoretical knowledge and piano skills, benefited more from the improvisation activities, when sufficient stylistic and theoretical knowledge and practical skills were established. Kathleen from the Late IG explained: *"I think piano improvisation is helpful, but it is also intimidating initially. There are so many rules that it seems improvisation is very difficult or not that fun. But with more knowledge about the style, it is much more profitable and enjoyable. ...because jazz was not so familiar to me, it [improvisation] really helped to hash things out on the keyboard. This helped the concepts make more sense to me"*.

However, starting with improvisation seemed to have motivated Zack from the Early IG, who had the least theoretical knowledge of all students and had low piano-playing skills; because active engagement in peer improvisation activities required him to be able to accompany other students he also commented: *"... My theoretical background knowledge is relatively low. The experiment group [gave] me more opportunities to practice"*.

Nevertheless, most students who saw improvisation as an additional music activity only in the second half of the course were eager to learn about it. Larry pointed out the benefit of *"learning by doing. ... It [improvisation] offers an opportunity to try some 'own things'... and /it/ supports learning very much!"* *"...There were much more actual things to try... (instead of just listening and trying to remember at home). Improvisation was motivating, as Jodie explained, "It's more interesting and fun to study by playing anything,"..."but maybe these jazz tasks [using improvisation] have been even more inspiring..."*, indicating that learning jazz harmony was even more meaningful when combined with improvisation. Most of these students seemed to improve their theoretical knowledge during the first half of the course, than those who started with improvisation, because the goal was to acquire proper skills and knowledge for the improvisation.

Students also had more time to establish their theoretical and practical skills with other practical music activities, such as realising and playing the various chord progressions, practicing accompaniments by playing along with or without the recording and score. This period of familiarisation during the first phase of course (without improvisation) was useful for instance to Pamela who felt that her jazz theoretical knowledge improved more without improvisation: *"...Because in the beginning everything was new and we got to know all the basics ... for example the II-V-I system as a part of cycle of fifths"*. Even Kathleen who had extensive classical background saw the benefit of the first non-improvisation phase: *"The first semester began by refreshing my previous knowledge in baroque harmony, I think because baroque was more familiar to me, it felt more relatable. In this way, I was able to grasp the concepts more easily branching from my theoretical knowledge and slowly applying it practically."* Furthermore, because she had never learnt jazz in informal context added: *"in the second semester [improvisation phase], I was much more comfortable with: (a) the group [being one of the international students], and (b) the material. I was not so scared of making mistakes, as before, so improvisation was not as terrifying for me. And because jazz was not so familiar, it really helped me to hash things out on the keyboard. This helped the concepts make more sense to me"*.

Nevertheless, it could be seen that all students were motivated by learning both baroque and jazz harmony with improvisation. Students expressed their appreciation of improvisations as additional activities in the improvisation parts, evidenced by the increased ratings of the usefulness of both peer and individual piano improvisation activities in both styles. However, their different levels of theoretical knowledge and practical skills such as piano and improvisation influenced their learning goals and achievements differently. In the following sections, I present those conditions that seemed to have made improvisation beneficial to the students' learning of harmony.

5.6.4 Benefits and challenges of improvising with peers

Improvisation exercises with both baroque and jazz material were motivating but challenging activities for all students, even for those students who had more experiences in piano improvisation, theoretical knowledge, and backgrounds of playing the piano in either baroque or jazz. Students came to the course with different levels of practical skills including piano skills, piano accompaniment, and improvisation skills. At the beginning of the course, it appeared that students' performances in the improvisation tasks were dependent on their technical ability to play the piano. Accordingly, when students improvised together in pairs or in trios, they were able to share the various parts of music between each other, such as melody, bass, or chord accompaniment, either with two hands or one hand. This way, students with less piano skills were able to be involved in the learning progress that increased their encouragement and motivation to learn either the music theory or develop their various musical skills. Peer improvisation exercises further affected their aural skills, creativ-

ity, and positive collaborative attitude, which made all of these events even more meaningful, enjoyable, and memorable.

5.6.5 How did the accompaniment technique affect the peer improvisation exercises, the development of theoretical knowledge, and aural skills?

Because the principal aim of the harmony course was to learn certain stylistic features of both baroque and jazz harmony, the fundamental way to start improvising variations on both baroque and jazz materials was to play the chord progression in different voicings and, positions of chords, focusing on the correct voice-leading. Depending on the students' technical ability, these activities were performed by the students together with me or alone either with one hand or with both hands. Students could also play the chord progressions with the recorded music in both styles either with or without the score. The recorded baroque opuses provided excellent sources to get familiar with the stylistic interpretations of the chord accompaniments similar to the recorded jazz standards or the "play-along" recordings.

The accompaniment technique played an important role in the various peer improvisation exercises, from which all students benefited in various ways. Some of them developed their understanding of theory, such as the voicing and voice-leading of chords in chord progressions, meanwhile other students were more involved in the peer improvisation exercises, and some of them both. However, students from the Early IG needed to concentrate on all the activities at once, so for them, the peer improvisation tasks were more connected to performing the comping technique well. Students with more skills were able to concentrate more on the improvisation. For instance, Harriet, who had excellent piano, accompaniment, and aural skills, learnt free piano accompaniment at the advanced level and had solid theoretical knowledge in both styles, so the current course was a kind of a routine to keep her knowledge fresh. Whereas for Zack, who had the lowest level of practical skills and theoretical knowledge in the group, the comping technique seemed to have been the first step to performing the improvisation.

Students played the various chord progressions from both baroque and jazz material in various positions and voicings, for instance, full chords or omitted fifths, either with both hands, separating the bass with the left hand, or with one hand (mainly the right hand). The starting positions of chords were changed in order to emphasize the melody on the top. The students also needed to take care of the proper voice-leading, but I also encouraged the students to play the chords freely, ignoring the strict voice-leading rules. In this way, I hoped that they would be able to improvise simple and interesting melodies. The meter and pulse depended on the music material, but the accompaniment's rhythmical solutions mainly followed the given musical genre. The register of the accompaniment depended on the number of students involved in the accompaniment, the type of peer improvisation exercises, and the music material.

Melanie seemed to have excellent aural skills and good piano accompaniment skills that she mainly acquired through informal music activities, as she

mentioned the following in the email questionnaire: “... I do a lot of piano accompaniment at student meetings, ... pop songs both with guitar and piano”. However, she did not have any formal jazz background and jazz improvisation; therefore, she benefited from the various accompaniment exercises especially with jazz material. She was eager to experiment the voice-leading possibilities and the various positions of chords, such as on the cycle of fifth chord progression based on the Autumn Leaves. Her theoretical knowledge also showed development during the experiment that could be seen in the perfectly solved baroque chord progression voice-leading tasks from the figured bass and jazz II-V-I voice-leading tasks in the post 1 harmony test (she entirely omitted these tasks in the pre-test). She also affirmed in the FQ: “Voice leading was clearer ... because we had to play ourselves and therefore think about it more”. The students’ ability to identify the II-V-I and cycle of fifth chord progressions by listening also improved in the post 1 harmony test, but the ability to recognise the various extensions of jazz seventh chords still needed to improve.

Similar to Melanie, Elliot’s theoretical knowledge and voice-leading technique also benefited from the comping activities; however, he had a different background and different musical skills from the other students in the group. Elliot had extensive jazz formal training including piano, theory, and improvisation. He was also the most interested in learning with improvisation, and this could be seen in the first video, when Elliot was the first student who attempted to play the cycle of fifth chord progression based on the song Autumn Leaves, when we started to explore improvisation with peers. Even though he played the chords only with the right hand, while I played the walking bass, he was eager to experiment with various positions of chords and voice-leading that we had learnt. He performed the improvisation with excellent rhythm playing the chords on upbeats. Furthermore, he tried to make variations of the chords with chord breaks and chromatic passing notes.

At the sixth lesson, we explored the II-V-I cadence and basic elements of jazz improvisation; Elliot was eager to explore the chord figurations in the chord accompaniment as well as the melody improvisations on the cycle of fifth chord progressions. The development of the understanding and hearing of the chord progressions in relation with the melody could have contributed to the notable development of the jazz pattern transcription by the post 1 harmony test, where he seemed to better recognise the II-V-I chord progression behind the melody. Furthermore, his pre-harmony test result reflected his solid theoretical background in jazz in both writing and aural recognition tasks, as he solved the most complex theoretical voice-leading writing tasks of II-V-I with all the learnt colourations and additional notes with an accuracy of 100%; he showed an improvement in recognising the colourations of these chord progressions by listening.

Both Melanie and Elliot enjoyed and progressed well in learning accompaniment and piano improvisation, which could be attributed to their completion of the free-accompaniment (vapaa säestys) basic course during the second part of the course at the university.

Zack lacked theoretical knowledge and aural and improvisation skills, but he seemed to have had sufficient technical ability to play the piano. The fact that he started the course with the improvisation phase was also a significant motivation. Nevertheless, his accompaniment in baroque improved much faster than in jazz, since he had never learnt jazz before the course. At the eighth lesson, the video recording of his performance showed that he could play the i-v6-iv6-V chord progression quite well from different positions and it also seemed that he grasped the voice-leading technique well. He had problems with the leading note of the harmonic minor due to his limited knowledge of music theory. Nevertheless, despite his slow improvement in baroque harmony, it seemed that playing the accompaniment positively influenced his improvisation skills. Meanwhile, the jazz accompaniment remained very challenging for him over the entire improvisation phase, since the cycle of fifths and II-V-I chord progressions consisted of seventh and ninth chords. Therefore, he had more problems playing the chords in various positions and leading the voices correctly. Zack's theoretical development showed moderate improvement as he attempted to solve the baroque chaconne chord progression writing task from the figure bass in the post 1 harmony test, but there were still too many mistakes in terms of the spacing and inversions of triads. However, he could identify half of the chords correctly in the task of baroque chord progression analysis by Roman numerals. In contrast, because he lacked knowledge of jazz theory, the II-V-I voice-leading writing task remained untouched and aural recognition of these chord progressions showed no particular improvement.

With regard to the Late IG students, for Samantha and Kathleen, who needed more time to acquire the various musical skills and consolidate the theoretical knowledge, the comping technique seemed to have been the key for the improvisation. Samantha's case showed similarities with Zack's in terms of challenges faced while playing the chord progressions in various positions in both styles while keeping the accurate tempo. However, she had a half course time to practice the realisations of various chord progressions until she explored improvisation during the improvisation phase of course, she seemed to have more technical problems of playing the piano than Zack. Playing the chord progressions especially with four or five voices seemed to have been challenging but she consciously kept practicing and playing the chords with only three or four voices. In the improvisation part of the course, the development in her skills could be seen only by the eighth lesson, when she attempted to play the accompaniment of II-V-I for Jodie's bass and Kathleen's melody improvisations. However, she only played the seventh chords mostly in one position and without particular rhythm variations, and she concentrated on the correct voice-leading. Her voice-leading technique in writing unfortunately did not show any particular development even at the post 2 harmony test in baroque and jazz II-V-I chord progression, but she recognised the II-V-I and cycle of chord progressions through listening. Therefore, it seemed that for her, the accompaniment exercises together with the peer improvisations helped develop her practical and aural skills.

Kathleen had limited skills and experiences in piano accompaniment and improvisation. She had adequate informal experiences in improvisation before the course, mostly individually in the classical context. Nevertheless, she learnt classical piano for ten years, and this helped her improve her accompaniment skills over the year. Her harmony knowledge such as the voice-leading technique in both styles also showed improvement, which could be seen in the II-V-I writing task during the first phase of the course. Therefore, it seemed that the various listening, playing, and accompaniment exercises helped her learning progress, which resulted in her being confident to join in the various improvisation exercises during the improvisation phase. At the sixth lesson she still seemed to have had problems with the leading tone of the harmonic minor, as she played the chord progressions of the *Foglia* in various positions. This was also one of the weakest points of the voice-leading tasks in her harmony tests, but she understood the problem as she played. Despite of her moderate improvement of melody improvisations Kathleen could at least improve the chord progression realizations in both styles. The significant development in her jazz comping technique could be observed at the eighth lesson, when she played the cycle of fifth and II-V-I accompaniments in several trios. She played with excellent tempo, varied the rhythm with various syncopations, confidently changed the position of chords, and took care of the voice-leading.

Pamela, Larry, and Jodie, who already established their accompaniment skills before the course through the free piano studies at the university participated more confidently in the various accompaniment exercises. Jodie had extensive formal and informal experiences in improvisation and accompanying other musicians on the accordion. She also showed good theoretical knowledge that developed further during the first phase of the course, especially the voice-leading technique for writing both baroque and jazz chord II-V-I progression. However, having had such solid knowledge and practical skills, she could have performed much better at these tasks during the improvisation phase. Nevertheless, she concentrated more on the practical exercises such as comping and improvising than on theory. She made the following comment in the FQ: *"It's more interesting and fun to study by playing anything, but maybe these jazz tasks [using improvisation] have been even more inspiring"*.

Pamela and Larry, who had similar musical skills and background in music education, progressed differently in theory and practice. Both of them learnt classical piano at least for a decade and jazz for one year, but Pamela took more formal jazz theory and free piano accompaniment training than Larry. Pamela seemed to have been very exploratory in both accompaniment and improvisation and tended to follow her own ideas in both styles. She focused on the jazz melody and walking bass line technique in the peer improvisation activities as she commented in the FQ: *"I seemed to be more interested in melodies than harmonies"*. However, she needed to concentrate on learning certain techniques, such as leading the voices correctly something with which she had problems at the beginning of the course. In baroque style, it improved significantly during the first part of the course, but in jazz, it improved more during improvisation part

with improvisation. She also confirmed her challenges during the first part of the course: "... *In the beginning, everything was new and we got to know all the basics ... for example the II-V-I system as a part of cycle of fifths*". The ability to connect the learnt theory with the aural skills improved gradually over the year. She recognised the basics such as seventh chords of II-V-I and cycle of fifth chord progressions by ear during the first part of the course, but she achieved more with the tensions of seventh with improvisation. Therefore, it seemed that the various practical exercises such as listening and comping, established the theoretical and practical knowledge required to acquire high-level knowledge of jazz theory. The remarkable improvement in her practical skills in both accompaniment and improvisation techniques could be observed in the video recordings and heard in her all post-improvisation tests in both styles with peers and individually.

Larry's strengths of playing the chord progressions with the correct voice-leading and excellent rhythm could be observed during the lessons as well as in the writing tasks of the post 1 harmony test in both genres. His interest to learn harmony with improvisation was also evident during the course, and also specified in his comments in the FQ. However, Larry practiced peer improvisation and comping mainly with jazz material, so his practical development during the improvisation part of the course was mainly focused on jazz. A remarkable change I observed in his practical use of chords and chord progressions in jazz at the sixth lesson was when he led the voices correctly and played an excellent syncopated comping rhythm in swing. His practical skills seemed to have improved to a high level by the end of the course; however, in both jazz peer and individual post-improvisation tests, he achieved slightly lower scores than in the pre-test. The main reason behind this was that he eagerly tried to apply all the stylistic and theoretical elements we had learnt, for instance, the correct voice-leading for II-V-I with the left hand accompaniment in individual improvisation. Nevertheless, he recognised the II-V-I chord progressions excellently at the post 2 harmony test.

Overall, it could be seen that the accompaniment technique nurtured the students' practical ability to realise the chord progressions on the piano and fostered their understanding of the theory. Accompaniment exercises also motivated students to be involved in the various peer improvisation exercises. Therefore, the development of their accompaniment skills contributed to the improvement in their improvisation skills. Playing the chord progressions in various ways was also fundamental exercise in the non-improvisation phases of course. Therefore, it seemed that regardless of group, the remarkable development of most students' baroque chord progression and jazz II-V-I voice-leading writing skills during the first part of the course was not exclusively the result of the peer improvisation exercises, rather chord progression playing and playing-along tasks together effected to this development. This was strongly evident in the case of the students from the Late IG, who had taken the piano free accompaniment course before participating in this study. Nevertheless, these students benefited from their accompaniment skills together with the established theo-

retical knowledge, as evidenced by their performance in the peer improvisation exercises at the second part of the course. The practical use of chord progressions also fostered the aural recognition of various chords and chord progressions, such as the II-V-I and cycle of fifths, but these tasks in the harmony tests seemed to have improved slowly over the year.

5.6.6 How did the various approaches to melody improvisation contribute to the success of peer improvisation exercises and the development of stylistic knowledge and aural skills?

Similar to the chord accompaniment exercises, melody improvisations on peer accompaniment were also beneficial exercises but, they also revealed the students' weak points related to theory. For instance, although most students had a notable classical background, some of them had problems using the leading tone properly in the baroque melody variations, reflected by the missing leading notes from the baroque melody transcriptions. Melody improvisations helped students explore the various theoretical elements in relation to chord progression, such as fitting the scales to the chords in jazz or understanding and hearing the role of the leading tone of the harmonic minor and relation to the dominant chord.

Nevertheless, to help students deal with the initial challenges of stylistic melody improvisations at the first two lessons, we improvised various elements of music such as scales (pentatonic, major, acoustic) and chords (major, minor) without stylistic barriers, in duos. The positive effects of these activities were already observed among the students of pilot study course (Study One), and it seemed that these were similarly beneficial to the Early IG, as the students became more encouraged to improvise. The basic approach to improvising the various elements of music was to copy musical ideas such as phrases, musical sentences, rhythm patterns, characters etc. from each other, which gave music ideas to all participants to develop further. Regardless of the level of improvisation skills, students were encouraged to copy musical ideas from each other and improvise small variations on the heard musical ideas. Because, at the beginning, the students played with me, I gave them musical ideas to copy and develop. This technique seemed to have been useful for those students who had less experience in improvisation, for instance, Zack, who had sufficient piano skills but was not confident in aural recognition tasks. The question-answer exercises on the major pentatonic scale worked well in his case. This way his performance became more accurate in terms of rhythm and he attempted to vary the melodies.

However, these kinds of exercises appeared to have been very helpful for those students, who had much more experience in improvisation and more solid theoretical knowledge and musical skills. For instance, Elliot had extensive classical and jazz music background and his level of improvisation, especially in jazz was already at a high level at the beginning of the course. Since he never improvised on a simple G major chord in pairs, copying my ideas was important in order to develop his own musical texture. Melanie also challenged

herself to explore the free improvisation on the G major scale on my accompaniment. Because two other students performed the same task with me before her attempt, she combined the motives she heard from other students' improvisation with her own original ideas. She also reacted to my changes in terms of dynamics and character of the musical texture.

The principal musical ideas for stylistic melody improvisation were provided by the theme, chord progression, and bass line of baroque variations and jazz standards, which we explored and learnt in various ways at the lessons. Despite the systematic approach to explore the melody improvisation step by step, I noticed that, sometimes, I needed to provide instant ideas helping out even the most skilled students to proceed with their improvisation.

Copying the technique and performing question-answer improvisation exercises involving various theoretical elements of music without stylistic barriers gave students encouragement and self-confidence to trust in their skills and musical ideas, enhancing their creativity and musical expression. Furthermore, because these exercises required active listening, students' aural skills became refined, regardless of their aural abilities. Students were also encouraged to use this technique later in the stylistic improvisations with peers in both baroque and jazz contexts and in all parts of the music.

Melody improvisations on the given theme and chord progression with baroque material were approached first by playing the bass, adding the chord progression, and, finally, adding the theme and improvising the variations. Usually, I played both the bass and chord progressions at first, and at other times, these were shared between two students. With regard to the melody improvisation, if the students were uncertain about what to play at the beginning, I always let them first play the original theme; then, I encouraged them to improvise variations. Building up the melody variations could be done by varying the rhythm, embellishing the melody with non-harmony notes, or improvising various figurations of the chords. This was also practiced in two opposite ways: by extending the simple chord notes with non-harmony notes, such as passing notes, lower and upper neighbour notes, turns, suspensions or anticipations and by simplifying the more elaborated melodies into the skeleton of the melody.

The basic strategy was "less is more", since most students were too eager at the beginning to vary and embellish too much at once. This was observed, for instance, in the video recording of Lesson six, when Elliot tried to improvise too many melody embellishments on the i-iv6-v6-V chord progression. This might have been the result of the previous lesson, when we explored the non-chord tones, chord variants as a result of the voice changes, and the scales.

A similar approach was applied to the first jazz improvisations, i.e. students first realised the chord progressions and learnt the comping rhythm. They also started to vary the theme of the song 'Autumn Leaves' in terms of rhythm, upbeats, and features of swing. Furthermore, the students varied the melodies, for instance, with various turns, slides, or various chord figurations. The sys-

tematic learning to exploring melody improvisation possibilities seemed to have positively influenced the students' melody expression.

Because the Early IG learnt harmony with improvisation in the first half of the course, they were just beginning to explore the jazz walking bass line, whereas the Late IG students had more time to explore it through listening, singing and playing, and transcribing walking bass lines and connecting them to baroque bass variations. The more skilled or jazz-trained students in the Early IG such as Elliot and Harriet slowly acquired the technique to fill the space between the roots of chords in a chord progression with various melody lines.

With regard to the Late IG, when they improvised the walking bass lines during the improvisation part of course, some of the students appeared to have been too ardent to apply all the learnt elements to the improvisation. This was especially true for Pamela, who admitted that: "*When we played, I seemed to be more interested in melodies than harmonies*". For instance, at the eighth lesson, she tried to experiment all possible melody variations in the walking bass in two trios on II-V-I. First, she tried too many rhythmical variations at once, but after I showed her some patterns, she managed playing simpler but melodically more correct bass lines. She combined both scale-like walking and rhythmic note repetitions and used chromatic notes. Similar problems occurred in the case of Larry, who wanted to lead the walking bass across more than two octaves on the piano. Nevertheless, Pamela's eagerness of exploring the melodies in all aspects also seemed to have benefited her, as she showed remarkable improvement in transcribing jazz melody patterns based on II-V-I at the post 2 harmony test.

Jodie also attempted to improvise the walking bass lines at the same lesson on my accompaniment and played too many ascending walking bass lines with full chromatic scales that did not always sound very fine. After I showed her how to combine the scale-like melodies with certain chord notes, we ended up improvising another two variations that finally sounded excellent.

To help the students learn the walking bass, I suggested various ideas from my earlier teaching experiences (Benedek, 2010) and my experiences during the current course. Because the II-V-I chord progression is a part of the cycle of fifths, at first, I recommended the students just to play the roots of the chords on each beat of the bar in the 4/4 meter, keeping a steady pulse. To keep a symmetric form, the chord 'I' was played for two bars. This step helped the less experienced students such as Samantha or Kathleen to be able to be involved in the peer improvisation tasks exploring the walking bass. The second step was to play the fifth and octaves (roots of the chord) or to play the triadic chord notes in one direction, upwards or downwards, and turn back on the last beat. The third step was to approach the next root of the chord with the diatonic or chromatic note using upper or lower auxiliary notes from the fourth beat of the bar. This could be explored in either of the first two steps above. I also encouraged the students to repeat the roots of the chords and to add, for instance, only upper and lower chromatic and diatonic notes as slides to the next root of the chord. The fourth step was to "walk" the melody both upwards and downwards on the diatonic scale on three beats; then, on the fourth beat, if needed,

passing notes or upper/lower auxiliary notes either chromatic or diatonic in nature could be included. They played various permutations of chord notes, including seventh upwards and downwards. This was combined with the chromatic/diatonic auxiliary notes, approaching the next chord, as explained above. The last step was to let the students combine the stepwise motion with the chord permutations or the root-fifth motion with and without chromatic or diatonic auxiliary notes in each chord of II-V-I. An example was given to the students to start to walk the line upwards on chord II by approaching the chord V with a chromatic passing note and turning downwards on the chord notes of V7, which resulted in approaching the root of chord I from the diatonic half step (i.e. major seventh of I) and playing the fifth and octaves for one bar and a 153 permutation of I and approaching the II chord with the chromatic passing or auxiliary note. These approaches appeared to have been beneficial for all the students. The more skilled students improvised clearer walking bass, while the less experienced students explored more complex walking patterns. For instance, by the eighth lesson, Kathleen slowly attempted to apply the chromatic notes in the walking bass improvisation. She also experimented with various chord figurations in the melody improvisation instead of playing exclusively short and scale-like melodies. However, in the individual post-test task, she was uncertain about employing any particular embellishments or ornaments we had explored, as she only played simple stepwise melodies.

5.6.7 Contribution of the teaching material to the melody improvisations

The sequenced learning strategy of melody improvisation seemed to have been beneficial to all students, but the teaching material also played an important role in the learning progress. I observed that practicing and drilling the learnt material was useful and students seemed to have applied this in new material. This was especially true in case of those students who had either more stylistic or theoretical knowledge of a particular genre. Students also took ideas from the various opuses we had learnt and applied them to their improvisation both during the lessons and in their post-improvisation tests.

Pachelbel's Chaconne seemed to have been an influential baroque core material, e.g. Melanie and Elliot particularly focused on the proper use of the harmonic minor in the melody improvisations on the dominant chord. Melanie also confirmed my observation: *"I do think so [that piano improvisation is helpful to learn harmony] because one has to concentrate more on (for example) the use of the leading tone in melodies and so on"*. As a result, she became more confident in using the harmonic minor in the post-improvisation test in which she extended the chord progression with a dominant function, similar to the chord progression in Pachelbel's chaconne. Elliot seemed to have been so ambitious while employing the harmonic minor in his melody variations that by the sixth lesson, he seemed to have slightly overemphasized it, which sometimes resulted in a dissonant sound with the other triads. Nevertheless, he successfully included all of the elements of melody embellishments based on Pachelbel and Handel's chaconnes that we learnt and practiced during the lessons in his post-

improvisation test. He also applied modal scales combined with the harmonic minor that sounded interesting and enhanced the originality. Meanwhile Zack, who lacked theoretical knowledge and aural skills at the beginning of the course, seemed to have grasped both the harmonic and melodic minor quite well during the improvisation part and was able to use it in improvisation in a particular context. This development could be observed from the eighth lesson onwards, when we also learnt various new materials such as Handel's *chaconne*. Nevertheless, the harmony test results did not show this development, but his knowledge improved with practice. This was evident in his post improvisation test, where he applied certain figurations and melody embellishments we had learnt.

The employed material was particularly important for the Late IG students' improvement in melody improvisation with peer accompaniment, since their improvisation skills were tested on more style-specific chord progressions. The Late IG students had an autumn semester (first phase of course) to improve their theoretical knowledge in various ways such as listening, transcribing, and playing on the piano, so they could focus on the stylistic features of baroque and jazz improvisation. Kathleen, who had substantial classical harmony education seemed to have forgotten many elements of theory, such as the harmonic minor. She generally seemed to have been more uncertain in applying her stylistic knowledge while improvising melody variations on the various baroque materials, whereas she was much more confident improvising melodies without stylistic barriers. At the sixth lesson, when we started to improvise the *Foglia* variation, her melody improvisation started to improve slowly. Even though she became more confident in improvisation and music theory by the end of improvisation phase, she affirmed: *"I was not so scared of making mistakes as before. So improvisation wasn't as terrifying for me. ... I was able to grasp the concepts more easily branching from my theoretical knowledge and slowly applying it practically..."*. However, in her post-improvisation test she still was uncertain in applying either the harmonic or melodic minor or the melody embellishments we had learnt. Furthermore, her melody transcription skills showed notable improvement during the improvisation phase, and she stated, *"... improvisation made it a bit easier for me to recognize certain sounds..."*. She had problems recognising the leading notes of the dominant chord.

Samantha's improvisations in all parts of the music seemed to have improved even more slowly than Kathleen's, but this was mostly because of her limited technical abilities. She also seemed to have improved her melody improvisation on the *Foglia* variations at the sixth lesson on my accompaniment. Since she mostly stayed within one octave in her melodies previously, she attempted to extend the melodies to a higher register. She also played fluently as we played more variations together. Despite of her stops and uncertainty in improvising individually, Samantha applied certain stylistic features of harmony in her individual post-improvisation test in baroque, since the chord progression was similar to the *Foglia* variations. She used both the harmonic and natural minor scales well in her improvisation and because she finished the

musical sentence on the dominant chord, instead of on the tonic, she led the melody on the natural minor scale, resulting in a fine Phrygian close. This showed her good stylistic sense and musicality.

Students like Jodie and Pamela seemed to follow more their own musical ideas during the improvisation exercises, especially in jazz. Nevertheless, at the eighth lesson, both of them together with Larry appeared to have been motivated by the previous lesson material, i.e. the *Take the A Train*. The students improvised all parts of the music on the II-V-I chord progression in the major key in trios. All of them borrowed many motives from the theme of the jazz standard in their melody improvisations. First, they played relevant parts of the original melody, and second, they improved them further with variations, embellishing the melody mostly with chromatic notes. Improvising various part of the song seemed to have positively affected all of their rhythmical phrasing in swing, especially Pamela's.

Overall, it could be seen that improvising variations with particular music materials increased the understanding of various stylistic and theoretical elements of music and provided musical ideas for the melody improvisations. Students gradually applied the various stylistic traits gained from the music material used in their melody improvisation exercises during the lessons and most of them successfully applied them in the post-improvisation tests. Understanding the structure of melody related to the chord progressions also seemed to have improved students' performances in the melody transcriptions, which could be seen especially in the jazz melody pattern development on II-V-I chord progression.

5.6.8 Learning the two genres together

It seemed that the combination of two styles in the teaching material was beneficial to the students' learning process. It not only motivated students to learn harmony but also gave them various ideas to apply certain learnt stylistic features from one genre to the other.

In the Early IG, the students appreciated learning the two styles together. Harriet who had the most extensive background in both styles in the group commented: *"I'd say this approach is better than the one I grew up with (classical). It combines these musical styles and shows to students what these styles have in common"*. Melanie, who had more extensive classical background than in jazz, also pointed out the benefit of combining the two styles in learning harmony: *"I think it's useful because you learn the differences and similarities easier than if you studied them separately"*.

While Elliot, who had the most balanced education in terms of the two genres in the Early IG and was the most motivated to learn jazz and improvisation, appreciated learning the two styles together: *"... since there are some similarities in these styles, e.g. basso continuo compared to walking bass. Also any style learned is naturally a step forward"*. This was heard at the end of the improvisation phase, when he combined certain theoretical elements from each genre in the post-improvisation tests. He used the modal scales related to the jazz scale

theory in both baroque and jazz post-improvisation tests, making both his performances sound very good. However, in the baroque post-test, he improvised a few turns and appoggiaturas into the melody that we explored in the jazz improvisation. Despite the fact that certain melody embellishments may have sounded better in the jazz improvisation, I appreciated his experimentations. It seemed that learning Pachelbel's Canon at the last two lessons was especially beneficial since those stepwise sequential embellishments and suspensions we explored from the material were quite recognisable in the jazz post-improvisation performances.

Zack also applied an element from the baroque material to jazz. His jazz post-improvisation was in 3/4 meter and sounded quite original as we only practiced baroque improvisation in this meter. Since Zack had a very different cultural background as an international student, he seemed to have easily grasped and mixed the learnt stylistic elements of baroque and jazz although since most of the information was new to him. He also pointed in the FQ that *"They [the two styles] can merge together. I can easily see ... and learn the key point [of both styles]"*.

The Late IG students had more diverse opinions about the usefulness of combining the two genres in the harmony course. For instance, Samantha stated, *"I don't know. I think this package that you gave us was important and useful, but I guess one can teach with any kind of package these harmony things"*.

Larry also had a neutral opinion about the subject: *"They support each other somehow..."*; he was more interested in learning jazz harmony.

In contrast, Kathleen, who had lesser exposure to the jazz background than the other students affirmed: *"... the styles have many similar attributes.... Personally learning the two styles together was great for me because I was trained classically and I am more familiar with baroque. Teaching together with jazz gave me a better understanding of the different styles, so that I was not jumping into something that I was completely clueless about"*.

According to Jodie, learning the two styles together was *"important and useful"* and baroque music, which is *"full of genius ideas"* also provided ideas for learning jazz. She also applied elements from jazz to the baroque improvisations. For instance, at the third lesson, she accompanied Larry's melody improvisations on Pachelbel's chaconne in swing using chromatic notes in the bass, similar to the jazz walking bass. In the individual post-improvisation test in baroque, she also played her left hand accompaniment with those octaves and fifth figurations that reminded me of what we explored as the basic structure of the jazz walking bass line at the lessons. Mixing ideas from various styles was not a new phenomenon in her musical background, since she played the accordion for 20 years in various genres. She also added that *"...[she] usually listened and played (out of school) popular music and folk-music"*.

Altogether, the students' opinions about the benefits of learning baroque harmony together with jazz harmony as well as their various solutions to the cross-application of certain stylistic elements in the improvisation suggested the relevance of combining the two genres in harmony teaching and teaching improvisation in both styles combined.

5.6.9 The benefits and challenges of group learning

The findings showed that peer improvisation activities contributed to the students' understanding of harmony and helped improve their piano and aural skills and creativity. The success of peer improvisation activities depended on the students' individual skills. Because the students' musical skills showed notable differences, the challenges faced by them and their success in improvising the various parts of music such as providing accompaniment or improvising melodies and walking bass lines were highly dependent on the abilities and performances of their peers. Usually, when students with similar musical skills were paired with each other, they could experiment more with the style and challenge themselves with more sophisticated solutions in the musical texture. Students with different abilities in a duo or trio benefited differently from each other. The less skilled students faced more challenges in their improvisation that was, on the one hand, a kind of pressure for them, and on the other hand, they could learn from their peers, e.g. copy various ideas, and enhance the overall development of their improvisation techniques. The more experienced students, however, needed to be very collaborative to help the less-skilled students, for instance, to keep a more stable tempo and accurate rhythm; these situations definitely positively influenced their rhythmical skills. They needed to "clean" the overall sound by simplifying their improvisations, changing the positions of chords, and embellishing the melodies differently, and this improved their creativity in improvisation. This was especially beneficial to the more skilled students' musicianship because, in general, they wanted to play "too much" at once. Furthermore, because all of these situations required careful listening to each other's playing, the challenges enormously improved not only the less skilled but also the more talented students' aural skills. The video observations provided numerous examples of these peer-learning situations.

Harriet was the most skilled in piano improvisation in the Early IG and already had some experience improvising with the current music material as she participated in my harmony course for Study One. At the beginning of the course, she was happy to be my kind of "demonstrator" in various peer improvisation exercises, encouraging the less experienced students to join in improvising. Her accompaniment skills were already at a high standard, but the various group improvisation situations, especially with the jazz material, could still challenge her rhythm expression. For instance, at the eighth lesson, when she joined improvising in a trio on *Autumn Leaves*, she immediately became the leader of the group as she needed to provide the chord accompaniment at excellent tempo and swing feel, because I switched off the play-along recording. However, at the last day of the improvisation phase of the course, Harriet seemed to have been even more creative with melody embellishment and rhythm variations than at the previous lessons, but that time, she played with Elliot and Melanie, who had more technical abilities and skills at improvising.

Another example was Melanie, who played with more ease and fun whenever she played with other students. She seemed to have a collaborative attitude in group improvisations, which may have been the result of her exten-

sive informal experiences accompanying Christian hymns and other popular songs at various occasions. Nevertheless, she appeared to have become more accurate in keeping the accurate tempo and rhythm, when she played the accompaniment for Zack, who had more problems improvising the bass or melody. She tried to help him by emphasizing the pulse by simplifying the syncopated rhythm variations. She seemed to have been motivated to take more risks by exploring her own ideas when she was paired with more talented students. Even though she made more mistakes when she tried to vary the chord progression in her accompaniment by colouring the chords with secondary dominants, these mistakes even encouraged her to experiment more, as the other students reacted positively, sometimes by laughing.

Larry had excellent piano and aural skills that contributed to the development of his improvisation skills, in which he was much less experienced; he also seemed to have learned from his peers. This could be seen, for instance, when he was improvising with Jodie's accompaniment on Pachelbel's Canon. Jodie, who was very experienced in piano and accordion accompaniment and improvisation with other musicians, challenged Larry with her own ideas on Pachelbel's opus. Jody also showed her creative side in changing the style to swing, varying the bass and the chord progression, and applying chromatic notes in the bass that sounded similar to a jazz walking bass. It seemed that after playing slightly hesitant melodies, Larry began to cope with these changes. Eventually, he succeeded to improvise fine melody variations that fit very well with Jodie's comping style. He also applied some of those melodies and embellishments that reminded me more of the original Pachelbel variation. These performances showed his stylistic sense, solid theoretical knowledge, and eagerness to apply what we had learnt at the lessons, even though he was regularly absent for a part of the initial lessons. Larry's performance also positively influenced Jodie's improvisation. The improvement in Jodie's jazz peer improvisation in different parts of music seemed to have been very much dependant on her partners' skills. Because she had extensive experience improvising in various popular styles with other musicians, she was influenced by the peers from whom she could copy stylistically appropriate musical ideas. When Larry provided the II-V-I chord accompaniment with excellent swing rhythm, arpeggiating the chords with fine syncopations, it immediately affected Jodie's melody playing. She left behind those clichés, such as slides, that she had got used to playing on the accordion. Her swing sounded much better without making the triplet too sharp like the dotted rhythm. Jodie also improved her rhythmical expression in terms simplifying her ideas; this could be heard in her post-improvisation individual test in jazz. However, she seemed to have overused the same rhythm pattern that negatively affected the originality of the performance. Nevertheless, the colourfulness of expression and wide range of melody embellishments created a balance between the simpler rhythm solutions. Because she had excellent skills in improvising any part of the music with her peers, she was always eager to play a variety of difficult rhythm patterns. To learn to simplify either the melody or the rhythm in her improvisation resulted

in an overall clearer sound, which was especially beneficial when she improvised with the less skilled students.

Jodie was also supportive of the less skilled students. This was observed, for instance, at the sixth lesson, when we started to improvise melodies on the cycle of fifth chord progression in different keys, positions, spacings, and colourations in duos. Jodie patiently accompanied Samantha's walking bass, since she had more technical problems than Jodie. Jodie first played the chord sequence with different spacings, mixing the positions of the chords, but it did not seem to be very helpful for Samantha. When she paid more attention to the voice-leading and the positions of the chord progression, Samantha, who had excellent aural skills, better heard the roots of chords from the chord sequence, and she could manage to improvise some simpler walking bass figures.

Since Samantha seemed to be less technical adept at playing the piano, she benefited from improvising with her peers in the group. She joined improvising the melody part on II-V-I chord progression only from the eighth lesson. Nevertheless, she experimented only with simple scale-like melodies, mostly in an octave interval. She kept the rhythm very simple, mostly playing crotchets on the main beats and varying the rhythm moderately with quavers and syncopations. Nevertheless, the melody improvisation exercises also positively influenced her remarkable development in jazz pattern transcription in the post 2 harmony tests.

Pamela also seemed to have been supportive when comping to Samantha and Kathleen's melody improvisations based on Pachelbel's Chaconne. Pamela patiently supported both students who were less experienced in improvisation. She played the chord progression at a slower tempo for Samantha, who was not highly skilled at playing the piano. Samantha started the first variation with uncertainty, but when she misplayed a note, she corrected well with those that fit the chords. Because Samantha carefully listened to Pamela's playing, the second variation sounded very fine since she played the chord notes that followed Pamela's chord sequence. As a result, she became more confident to play various embellishments of her short melodies, such as passing and lower neighbour notes, on the second half of the chord progression. Kathleen had more experience playing the piano than Samantha, but had similar trouble with improvisation. Pamela seemed to have been very supportive again to play the intro for Kathleen, who wanted to listen to it first to tune herself for Pamela's comping style. Kathleen was more experienced in popular music, playing these styles in her spare time. Because Pamela's accompaniment sounded quite like popular music, Kathleen's ideas fit perfectly to Pamela's style. Kathleen's melodies were simple, using both pentatonic and major scale, but she consciously built up the melody lines. After many variations, when Kathleen became more confident, Pamela also started to experiment more with her own ideas. She also seemed to make a very fine "mistake" of turning back the bass line after chord VI, resulting in a iii64 that surprised both of them very much (as they smiled to each other) as it sounded very nice on Kathleen's melody. Pamela also encouraged Kathleen to smoothly bring the dynamic of music up and down.

Larry was the most motivated student to learn jazz and improvisation, and, fortunately, he could join in all the jazz improvisation exercises from the sixth lesson. Nevertheless, the most remarkable moments could be observed at the last lesson, when he improvised melodies together with Pamela in a call-and-answer manner on my II-V-I accompaniment. We explored various tempos and characters such as swing or ballad in slow rubato. Pamela seemed to have been the perfect partner for his musical ideas, and both of them copied and developed the melodies from each other. Larry appeared to have been especially creative when we explored improvising short melodies. Meanwhile, Pamela could show her excellent musicality in the ballad style by exploring various arpeggiated patterns and interesting rhythmical solutions, such as scale-like patterns and triplets. Altogether, both of them sounded much more matured and musical than during their previous lessons. Their levels of improvisation and piano skills matched very well with each other. The ideas we explored at the last lesson were heard in both students' individual post-improvisation performance in jazz. Both of them improvised in slow ballad and used certain slides and chord breaks that we explored. In addition, Larry concentrated on improvising short melodies that he slightly overemphasized.

Overall, it could be seen that the development of students' peer improvisation skills depended not only on students' individual skills but also on their peers' skills in various improvisation activities. Peers were influential to the musicality, dynamics, tempo, character, stylistic traits, and rhythmical expression of the group. The observations also showed that the success of peer improvisation activities depended on the students' collaborative attitudes. The collaboration, however, required active listening to others' ideas and challenges. Nevertheless, all students' aural skills benefited from these peer improvisation activities, regardless of their levels of improvisation or piano skills.

5.6.10 The benefits and challenges of playing along with recorded music

Playing along with recorded music played an important role in helping the students learn the stylistic features of baroque and jazz. Students learnt various musical opuses by listening to the recorded music and sang and played back to the heard theme, bass, middle voices, or chord progressions. After memorising the learnt theme bass or chord progression, the students also played along these elements of music with the recording. This was done also with the help of the score. Therefore, these exercises were important elements of the curricula of the non-improvisation phases of course.

Playing along the recording was also used to supplement students' accompaniment in the individual melody improvisations and this supported the improvisation activities on the separated parts of music. During the first part of the course, it came to light that many students had never played along with the recorded music, many from the Early IG (Zack and Melanie) and fewer from the Late IG (Larry), or had very limited experience with it. Because this activity was connected to the improvisation activities for the Early IG right from the

beginning of the course, the video observations were important for evaluating the positive and negative effects of playing along with the recordings.

At the fifth lesson, the first jazz improvisation took place. It appeared that the play-along recordings helped students to hear a band, especially the drum pulse and bass, which was important, at least, at the beginning of the process of learning the accompaniment with the various syncopations or practicing to play the melody with the recording. Elliot was the first student who attempted to play the cycle of fifth chord progression with the right hand in various positions leading the voices as we had learnt, while I played the walking bass. He played the chord progression with excellent tempo, playing the chords on up-beats. He seemed to have no problem keeping the tempo, since he was drummer, so I switched off the play-along recording after the fourth round and we just played together. In contrast, for Zack, the first attempt to play the accompaniment with the play-along recording was challenging, yet he was eager to try to play the cycle of fifth chord progression with sequential voice-leading on the Autumn Leaves' play-along with the right hand and my walking bass. Even though he seemed to have got lost in form many times, he played keeping the tempo, but the swing feel definitely needed to improve.

At the same lesson, Melanie played the chord progression with proper voice-leading and very well applied the various syncopated patterns we explored. She had more experience in comping than Zack, but she had trouble keeping the pulse and rhythm. As she was slightly ahead of the drum, I had the impression that she was too excited. After I switched off the recording and we played together, she became somewhat more relaxed and more accurate.

At the next lesson (Lesson 6), when we continued practicing the accompaniments with the play-along recording, we also tried to play the melody of Autumn Leaves. First, I showed them to play the melody (both A and B parts) in a very simple way; second, I showed some simple rhythm and melody variations on the theme, encouraging the students to try the same. After I finished my demonstration, I kept running the recording for anyone to try the task. Elliot was happy to play the melody and joined in the second line of the song easily. Similar to the previous lesson, he seemed to have played confidently with the recorded music. Zack was eager to try this task for the very first time in his life. It seemed that he could better follow where he is, as he did not need to pay attention to the voice-leading of chords, only the melody. It seemed that practicing with play-along recordings was especially beneficial to his tempo-, meter-, and rhythm-feel.

However, I also observed during the improvisation phase that the students, in particular Zack and Melanie, became much more relaxed and made fewer mistakes when they played either with me or with other students, but without the play-along recording. They did not need to worry about being out of rhythm and form, since we could stop and continue the improvisation whenever we wanted. For instance, at the eighth lesson, the students first time improvised together in various trios without score and without my assistance on Autumn Leaves. Elliot was keen on improvising all parts of the music in trios,

starting with the chord accompaniment with other two students' melody and bass improvisation. First, I also played the play-along recording because I thought it could help them keep the rhythm. However, they seemed to listen even more carefully to each other when I switched off the play-along recording. Students started to improvise simpler and clearer patterns that resulted in the whole performance sounding more organised. They also seemed to have played with more ease and fun without the recording. For instance, Harriet provided a stable bass and played more chromatic notes in the walking bass. Melanie became much more accurate in the chord accompaniment, so was Zack with his melody improvisation. In addition, interestingly, Elliot, who did not have any problems with the play-along recording, provided a more stable tempo without the recording and actually became a kind of a leader of the trio. He became the "drummer" and the heart of the group, keeping the proper pulse.

Nevertheless, play-along recordings appeared to have been beneficial tools for playing and improvising various parts of the music. Play-along recordings helped refine the students' tempo and rhythm feel together with their aural skills; also, most of the students highly rated the usefulness of play-along recordings at the end of the improvisation phase. Furthermore, students' appreciation of the play-along exercises, especially in jazz, increased during the second phase of the course, since these exercises to a certain extent "substituted" the improvisation exercises.

As I observed the positive effect of improvising both with and without the play-along recording, I assumed that this tool would be beneficial at least at the beginning of the learning process. With regard to the Late IG's improvisation phase, I decided to place more emphasis on group improvisation without the play-along recording and use this tool for learning the stylistic traits of music.

5.6.11 The effect of peer improvisation exercises on the development of individual improvisation

Most students' improvisation performances in both genres showed improvements over the improvisation phases of the course, evidenced by the grades awarded to their performance in the post-improvisation tests by the expert evaluators and my qualitative analysis. However, the students' progress levels differed from each other in terms of genre, the quality, and the ways of improvisation, i.e. alone or with peers. The students' development was influenced by their technical ability to play the piano, overall musicianship, experiences of improvisation in both formal and informal contexts, their level of interest in the particular style and activities, teaching material, the overall learning progress of harmony, development of stylistic knowledge, aural skills, and other practical skills. Accordingly, students improved the expression of their musical ideas differently from each other, such as musicality, originality, and the stylistic sense of rhythm, form, melody phrasing, and embellishment. Students from the Early IG needed to explore improvisation from the beginning of the course, so their development depended more on their previous education background

and the parallel development of their harmony knowledge and various practical skills during the improvisation phase. Most students of the Late IG relied more on the development of their harmony knowledge and other practical skills during the first phase of the course such as listening, transcribing, and playing and singing the realisations of chord progressions. Nevertheless, the students who had a low technical ability to play the piano or had no jazz education before the course found it more challenging to improvise in a particular context, especially individually.

Overall, the findings indicate that the various peer improvisation exercises were beneficial to the improvement of their improvisation skills. When students improvised together in pairs or trios, they were able to choose between the melody, bass, or chord accompaniment. Furthermore, depending on their technical ability, they could play the different parts of music either with two hands or with one hand. The melody variation exercises involving particular materials such as baroque variations and jazz standards generally increased students' stylistic knowledge in terms of melody phrasing, melody embellishment, rhythm, and form that also could be seen in the grades awarded to the stylistic criteria of their performance: *Stylistic awareness of melody phrasing and embellishment* and *Stylistic awareness of rhythm and form*. Playing together allowed students to borrow ideas from each other that increased their creativity to improvise original ideas. The students could also influence the expression of *musicality* of peers that affected not only the overall performance of the group but also their own individual performance.

Improvising alone was beneficial for those students who were technically skilled at playing the piano and had experiences improvising with various materials and in various musical styles. Because few students seemed to have had these skills, I focused more on peer improvisation activities in order to encourage more students to participate. The students were never forced to improvise alone at the lessons, but all of them were asked to demonstrate the chord progression realisations on the piano. However, because a few students seemed to have technical problems, they were allowed to perform these exercises either with me or with other students, who could support the chord progression by playing the bass separately. Nevertheless, the various peer improvisations in duos provided also challenged the more skilled students. They could provide the accompaniment with both hands, e.g. playing the jazz walking bass with the left hand while varying the melody in the different positions of the chord with the right hand. Accordingly, the peer improvisation activities helped develop the students' accompaniment and individual improvisation skills.

The students' different technical abilities influenced the development of their individual improvisation in both styles, particularly in jazz, which could be principally heard in the students' post-improvisation performance in both styles. The ratings given by the expert evaluators could be considered as general objective feedback; the ratings showed that the students started the improvisation phase at very different levels of improvisation skills. The starting scores of individual improvisations in both styles reflected the students existing

experience in improvisation, the time spent learning the piano in the particular genre, their creativity in expressing their original ideas, their musicality, and what kind of stylistic knowledge they included in the improvisation. The progress in harmony and stylistic knowledge of the Late IG group also influenced their pre-test performances. Furthermore, the two groups had to improvise different chord progressions, and this highly influenced what kind of theoretical and stylistic knowledge they applied in both pre- and post-tests. Therefore, because the content the students actually improvised and the development of their improvisation and other skills either during the improvisation phases of course or over the entire year were known data, for summarising students tests performances, I considered the experts' numerical evaluations as background data.

Generally, the students' (Early and Late IG) performances relied on what kind of stylistic knowledge they already had. The Early IG had to improvise on the Dm-C chord progression, which provided more freedom of form in which the students improvised. Students could also choose between Dm and C as the key for improvisation. If the students chose C major as the key, the degrees of Dm and C major became obvious (ii-I), but when they choose D minor, they could improvise on modal scales, but could include the harmonic and melodic minor on the D minor chord. The successful application of the harmonic minor fostered the Early IG students' development of baroque improvisation. Therefore, the students used many more of the stylistic elements in the baroque post-improvisation test, which we had learnt during the first part of the course. Moreover, the students' had the opportunity to extend the chord progression with another chord emphasizing the functional structure of the improvised music, which could be heard, for instance, in Melanie's pre- and post-baroque improvisations and in the pre-improvisation jazz performance.

With regard to jazz, the students needed to improvise on the same Dm C chord progression. Besides using C major or D minor as the key of the improvised music, most students extended the chords to the seventh chords emphasizing that jazz was mostly included the use of the seventh chords. They thus had more opportunities to play in either in C major, D natural minor, or in modal keys. On the other hand, the openness of chord progression posed challenges to the students, especially those who had less theoretical knowledge.

The Late IG had to improvise on a different chord progression in each style, based on concrete music material from both baroque and jazz. The chord progressions i-V-VI-V in baroque and II-V-I in jazz restricted the possibility to apply certain elements from music theory, because the chord progressions clearly indicated the functions. The chord progressions suggested the four-bar structure for both baroque and jazz improvisation, in the music pieces we had learnt, but the students could still choose the meter and formulate the real-time composition, similar to the Early IG students.

However, the Late IG learnt these chord progressions during the first phase through various approaches and various music materials. They played chord progressions in various ways that altogether helped them increase their

stylistic expression in the pre-improvisation tests. Therefore, with regard to the individual improvisation tests, the students seemed to have applied certain stylistic elements from both baroque and jazz that they had learnt during the first phase in their pre-improvisation tests. However, they achieved very differently, generally showing much higher starting levels (as well as assessment scores) in their individual pre-improvisation tests than the Early IG students. These starting levels also reflected their piano skills more than the experiences of improvisation. Therefore, the students' existing technical abilities, which developed during this short time of improvisation phase, highly influenced their post-improvisation performances. The Late IG tended to apply the learnt stylistic and theoretical elements to their individual post-improvisation tasks as they did to their pre-improvisation tasks, but the technical solutions, i.e. how they applied those elements in the performances, also highly contributed to the successful completion of individual post-improvisation tests. The students, who had more piano skills and comping or improvisation skills, such as Pamela or Jodie, could formulate the musical texture more colourfully. For instance, they could use many registers, combine the melody with the left hand accompaniment, and use various chords figurations and arpeggios that enhanced the originality of the improvised music. Moreover, it could be observed that most of those students who had these technical tools to improvise more colourfully were more musical than others. These improvisation performances were not necessarily based on the learnt theory or did not follow strictly the learnt theory. Larry's case demonstrated the opposite, where his careful application of the learnt theory and stylistic features did not necessarily enhance the overall musicality of his performance. In the jazz post-improvisation test, he seemed to have taken care of the correct voice-leading of II-V-I with the left hand accompaniment. He also played the chord progression in the same positions as we had learnt, making the entire performance significantly flat in terms of musicality and originality, as compared to his pre-improvisation test performance. In addition, he also over-stressed the short melodies in the improvisation that we also practiced in the last lesson. All of these conditions decreased the aesthetic value of the performance, affecting the overall grade awarded to the performance. However, the expression of dynamics and tone of colour are not dependent on the improvised musical texture, as it could be heard in Samantha's post-improvisation tests in both styles. Although she could not express her musical ideas properly on the piano because of her technical weaknesses, she took care of the dynamics of the performance, and this resulted in the musicality being rated highly.

The evaluation of the rhythmical ideas of the post-improvisation performances depended on what kind of musical character was used in the improvisation. The students, such as Larry and Pamela, who choose the rubato ballade style in the jazz post-improvisation tests received low ratings from the evaluators, since there was no guideline for evaluating the rhythm in such a character. Also, however, it could be heard from the students post performances, regardless of group, that they developed the sense of form but since the rhythm and

form was included in one assessment criterion (*stylistic awareness of rhythm and form*), the experts' evaluations did not show these differences. Therefore, the numerical assessment of students' rhythmical development did not seem to be perfectly reliable in the absence of my qualitative evaluations. The criterion *stylistic awareness of rhythm and form* should have been separated into two independent assessment criteria, (explained in Chapter 6.2). Furthermore, as no guidelines were specified to the expert evaluators, I decided to consider my observations and qualitative analysis as the principal source of the summary.

Altogether, it could be seen that the various peer improvisation activities were generally beneficial to the students' individual improvisation performances, but the students' technical abilities and piano skills were factors that highly influenced the expression of their musical ideas. Furthermore, the students' individual improvisations depended on their stylistic and theoretical knowledge, but the subject of improvisations, i.e. chord progressions, influenced what knowledge the students put into practice. The students who started the course with improvisation were more uncertain in expressing their theoretical and stylistic knowledge while improvising with the chord progression, which provided more freedom and possibility to formulate ideas in both baroque and jazz. Nevertheless, these students seemed to have learnt to apply the stylistic knowledge to the improvisation and applied it in very creative ways to the post-improvisation tests. The students who started practicing improvisations later in the course, because they already learnt the material that formed the basis for the chord progressions in baroque and jazz improvisation tests, were more confident applying their stylistic and theoretical knowledge to the tasks. These students, however, seemed to have developed their skills moderately in the individual improvisation tasks, since they had more limitations improvising style-specific chord progressions; they deepened their stylistic knowledge and consolidated their stylistic improvisation skills using the given material.

5.6.12 The effect of peer improvisation exercises on the development of melody improvisations with peer accompaniment

In the peer improvisation tests for the Late IG, the accompaniment provided by me specified the frame of the melody improvisation in terms of meter, tempo, character, and the register of the melody. The baroque accompaniment followed the rhythm pattern of the chaconne in 3/4 meter, with each chord in one bar, resulting in a four-bar-long pattern. The numbers of improvised melody variations depended on the students, but four variations were recommended in order to keep the symmetry of music. Because I always played the intro to present the tempo and character; sometimes, students improvised only three variations. In addition, sometimes students wanted to start with me, so I just counted aloud to give the tempo. I played the accompaniment as the students explored the various chord progressions on the piano. I played the chords with the right hand changing the positions freely, but when I played the intro, I always paid attention to the proper voice-leading. The bass was played with the left hand following the chaconne rhythm pattern (Figure 34 A). However, I improvised

variations in terms of positions of the chords, rhythm, and bass to a moderate extent; to avoid any bias, I played these variants similarly for all students. The students were free to finish the chord progression on both the dominant chord and the tonic chord, allowing them to finish the tonic chord on the fourth bar of the pattern or extend the form with the tonic chord. In jazz, I played the intro in all cases to present the 4/4 meter, the medium tempo, swing and the frame of II-V-I that resulted in a four-bar-long pattern, with each chord in one bar (II-V-I-I). The voicing of the chords included four voices in varying positions played with the right hand, with the inclusion of the ninth, thirteenth, 6 and 69 chords, while the left hand played the full walking bass lines (Figure 34 B).

Dm A B^b A

d: i V[#] VI V[#]

FIGURE 34A Accompaniment intro for baroque melody improvisation test

Dm9 G13 C69 CMaj9

FIGURE 34B Accompaniment intro for jazz melody improvisation test

All of these issues substantially influenced the students' performance in melody improvisation tasks in terms of expression of tempo, character, dynamics, colour of tone, stresses, the melody phrasing, and rhythm patterns. The limitations provided by the accompaniment supported the generation of ideas because students concentrated more on the melody line, phrasing, rhythmical ideas, embellishments, and ornaments. Students did not need to figure out the character of music or the technical solutions to combine the musical texture with both hands. On the other hand, these limitations provided by the accompaniment emphasized the rhythmical inaccuracy, the diverse rhythmical phrasing, stresses, expression of colour and tone, the dynamics, and the original ideas that differed notably from the style of the accompaniment. In addition, all of these challenges could influence the overall musicality of the performance.

In addition, while listening to and evaluating the students' melody improvisation tests, the given frame and accompaniment helped my analysis. The differences between pre- and post-improvisation performances in both styles became clearer in terms of the assessment criteria, as I could concentrate on the figurations, chord and melody embellishments, ornaments, and rhythmical patterns the students applied in the melodies and how the melodies fit the given chords, the functional order of chords, meter, and character. However, I did not gather feedback from the evaluators about which improvisation test they felt was more challenging, I assumed that written descriptions about each evaluated performance should have been supplemented the experts' numerical ratings. The experts' numerical assessment of melody improvisation tests with peer accompaniment differed significantly from the rates for the individual improvisation tests in terms of starting level and development and genres, which suggested the relevance of my evaluation and treating the experts' evaluations as a background data for my evaluation.

At the beginning of the improvisation phase, the students used the theoretical and stylistic knowledge they acquired over the first phase of the course through various listening, singing and playing exercises, playing along with recorded music and score, and melody transcriptions in the melody improvisation tasks in both styles. Students improvised the melodies at different levels depending on their technical abilities because they had to concentrate on one voice; the skill differences were not as recognisable as they were in the individual improvisation tasks. The students' melody improvisations with peer accompaniment showed similarities in both starting levels and development, in contrast to the individual improvisations. The homogeneity in the starting levels of peer improvisations was even more recognisable in baroque, since students had significantly higher classical music background and less experience improvising in baroque style with peers on the piano. Even the students, who had more experience in accompaniment and peer improvisation applied certain stylistic elements from the baroque material, but all of these applications sounded more prominent in jazz than in baroque. Because students' informal music activities and peer improvisation experiences were associated mostly with popular music styles (including folk music and jazz), they seemed to have been more confident improvising fine rhythm patterns. The students who had more skills in accompaniment also easily applied the learnt theoretical elements in jazz melodies. For instance, Larry improvised various chord figurations on the II-V-I, while Pamela seemed to have borrowed the sequential melody from the II-V-I chord voice-leading realisations with the ninths that we explored and practiced during the lessons. The systematic exploration of melody variations from the perspectives of chord or chord progression and the perspectives of baroque variation opuses and jazz standards resulted in students' increased expression of stylistic traits of music in melody phrasing and embellishment, rhythm, and form. This was observed during the lessons and in the post-improvisation melody tests in both styles.

The baroque melody improvisations seemed to have developed to a remarkable extent in terms of stylistic traits as students attempted to apply more embellishments and ornaments that we explored in during the lessons. A similar development was observed in jazz, but the learning progress in jazz showed more variability between students than in baroque. The only exception was Pamela, who was the most motivated to explore the melody improvisations in both styles, as she emphasized in the FQ: *“When we played, I seemed to be more interested in melodies than harmonies”*. The technical skills and theoretical knowledge seemed to have affected the practical application of the stylistic traits in jazz melody improvisation. The students who were not technically adept at playing the piano or progressed slowly while learning jazz theory seemed to be able to express their ideas moderately in the post-improvisation melody test, e.g. Kathleen and Samantha. These students performed better in peer improvisation than in the individual post-improvisation tasks. It also seemed that expression of musicality in the melody improvisations was parallel with the increased stylistic knowledge, in contrast to the individual performances, where, in most cases, the musicality was dependent on the students’ technical ability to play the musical texture more colourfully. With regard to originality, it seemed that the limitations posed by the accompaniment did not restrain students from experimenting with their own ideas or styles, but the attempts were more prominent in those students’ cases, who seemed to have been more exploratory during the lessons and played their original ideas in the individual improvisations.

Nevertheless, most students, regardless of the level of their piano skills, improvised with more confidence and in a more organised way in the jazz post-improvisation peer tests than in the pre-test.

Overall, the various peer improvisation activities involving style-specific materials and the sharing of the various parts of music between students, such as melody, bass, and chord accompaniment influenced the improvement in the students’ melody improvisation skills with peer accompaniment in both baroque and jazz genres.

5.6.13 Development of harmony knowledge and aural skills with and without improvisation – The role of other musical activities in the integrated course curriculum

Piano improvisation, especially with peers, motivated the students to learn harmony in both styles, but the timing of the improvisation exercises as an additional music activity in the course motivated the students differently. The integrated course that combined not only baroque and jazz but also various approaches to learning harmony altogether influenced the students’ learning progress. Students’ motivations depended also on their education background and existing knowledge and musical skills. Because students started the course at different levels of theoretical knowledge and practical skills, they also benefited from the improvisations differently.

The findings showed that the students who had more theoretical knowledge and practical skills such as aural, piano, and improvisation skills could apply their knowledge and skills easily to the baroque and jazz improvisation tasks, regardless of the group they were in. For those students who had lacked knowledge of theory and practical skills, the improvisation activities seemed to have been more beneficial when sufficient theoretical knowledge and practical skills were established. Because both groups included students with mixed backgrounds in terms of theoretical knowledge and musical skills, their progress in learning harmony was also different in the two parts of the course as well as over the year. Starting the course with improvisation was very motivating for students with less knowledge and practical abilities, because they needed to grasp the various theoretical elements of music in order to improvise confidently. When students improvised together in pairs or trios, they were able to share the various parts of music between each other, such as melody, bass, or chord accompaniment. The peers influenced the performance of group in terms of musicality, dynamics, tempo, character, stylistic traits, and rhythmical expression; the success of peer improvisation activities also depended on the students' collaborative attitudes. Since the students needed to listen intensively to each other while playing the peer improvisations, the students' aural skills were refined. Notwithstanding, the various peer improvisation exercises affected the development of the theoretical knowledge and various musical skills differently. The results of the three harmony tests provided sufficient feedback about the development of the students' theoretical and stylistic knowledge of harmony, ability to recognise and identify the various elements of music by ear, and the transcription technique.

Peer improvisation exercises consisted of melody improvisation, bass line improvisation, and chord accompaniments, with or without bass. Chord accompaniment exercises of other students' melody improvisation helped students to practice the various realisations of chords and progressions on the piano by exploring the voicing possibilities with full chords or omitted fifths in jazz as well as the voice-leading of chords in the chord progressions in both styles. Therefore, the comping technique seemed to have been influential in the improvement in the performance of the baroque chord progression voice-leading from the figured bass and the jazz II-V-I voice-leading task in the harmony tests. However, playing the chord progressions based on both baroque variations and jazz standards was also included in the non-improvisation parts of course' activities, since the first stage to learn and explore the harmony was to play the chord progressions. The Late IG students also practiced playing along with recorded music either by ear or using the score. Therefore, regardless of group participation, the students' notable improvement in the baroque chord progression voice-leading from the figured bass and the jazz II-V-I voice-leading task during the first part of the course generally seemed to have been the result of the chord progression playing and playing-along exercises. Nevertheless, because improvising accompaniments required students to consolidate their ability to play the chord progressions in various ways, the Early IG spent

more time to explore the subject than the Late IG. Melanie from the Early IG emphasized that improvisation helped her better understanding the theory: *"Voice-leading was clearer ... because we had to play ourselves and therefore think about it more"*.

The practical use of chord progressions also fostered the aural recognition of various chords and chord progressions, such as the II-V-I and cycle of fifths, but the performance in these tasks in the harmony tests improved slowly over the year. The harmony test results showed differences between students depending on the aural tasks, theoretical knowledge and the part of the course in which they improvised. For instance, despite the fact that Elliot had extensive jazz theoretical knowledge and sufficient aural skills, he better recognised the colourations of the II-V-I and cycle of fifths chord progressions only during the second, non-improvisation phase of the course. This was true also for Melanie, who had no formal jazz background but solid classical music theory knowledge. In contrast, Larry, who had a similar background to Melanie's, showed definite improvement in the aural recognition of the seventh chords with extensions in the chord progressions with improvisation. Kathleen and Jodie made excellent progress in this task during the first part of the course, whereas they showed no further improvement during the subsequent improvisation phase with improvisation. Meanwhile, because Zack lacked knowledge of music theory and aural skills, this task did not seem to promote any notable improvement during the whole year.

Nevertheless, the general improvement of understanding the II-V-I chord progressions by writing in the post 1 harmony test suggested that students of the Late IG would be able to test the improvisations on the II-V-I chord progression at the beginning the improvisation phase. Furthermore, since the Early IG also valued and enjoyed improvising together in duos or trios by sharing the parts of music between each other, my assumption that the Late IG they would be able to test also melody improvisation development on peer accompaniment during the second part of the course, seemed to have been appropriate.

Similar to the chord accompaniment, melody improvisations on peer accompaniment were also beneficial exercises for understanding the stylistic features of harmony in both styles, e.g. fitting the scales to the chords in jazz or understanding and hearing the role of the leading tone of the harmonic minor and relation to the dominant chord. Improvising various figurations on the chords or embellishing the melodies with various non-harmony notes such as passing notes, lower and upper neighbour notes, turns, suspensions, or anticipations helped the students delve deeper into the structure of harmonies. Melody improvisation techniques enhanced the understanding of the relationship between melody and the given chord progression. The melody improvisation activities developed the students' aural abilities to recognise familiar melody patterns that were related to the chord progression. Therefore, melody improvisation might have positively affected the melody transcription skills, but this was even strongly evident in jazz. For instance, Pamela, who seemed to be *"... more interested in melodies than harmonies"* showed a remarkable improvement in

her melody improvisation technique; meanwhile, her transcription performance showed notable improvement in improvisation phase.

Nevertheless, most students, regardless of group, developed transcription skills gradually over the year. The starting level of skill in melody transcription was much higher in baroque than in jazz, since students had generally more classical background that basically covers music from the Common Practice period. Generally, students seemed to be more skilled at transcribing the baroque variations in contrast to the jazz patterns based on the II-V-I, which were not familiar to many students. Understanding jazz theory generally took more time in the course as did improving the transcription technique. Hence, Kathleen and Samantha from the Late IG, who had less jazz theoretical knowledge or transcription skills, seemed to have succeeded more with the jazz pattern transcription based on II-V-I in the post 2 harmony test at the end of the year. For Elliot from the Early IG, who had solid jazz knowledge and already proven his excellent transcription technique in the baroque tasks at the pre-harmony test, the first (improvisation) part of the course was enough to enhance his jazz pattern transcription performance to a notable extent. Therefore, it could be assumed that these improvements were the exclusive effects of the melody improvisation tasks. Improvement in melody transcription also depended very much on students' aural skills and transcription technique. Furthermore, the transcription technique is connected to visual memory and score-reading skills. The various exercises such as the listening, memorising, singing and playing by ear or from the score, and playing along with the recording and score influenced the development of the melody transcription technique.

The aural recognition and the transcription of basic elements of harmony such as intervals, triads, and seventh chords in all positions gradually improved over the whole year. In these tasks students needed to identify these elements of music without musical context. With regard to the triads, the majority of the students achieved a score of at least 80% at the pre-test, whereas the scores for aural recognition of the seventh chords differed between students. Regardless of group, the students were skilled at recognising the triads during the first part of the course (achieving a score close to the maximum), and most of them showed this performance in the second part as well. In terms of the seventh chords, the scores of most students for both post-tests were around 80%, except in the case of Zack, whose score for the triads and seventh chords in the test was around 40%. Only Kathleen made notable progress during the second phase. She also explained that "*...I think improvising creates a well-rounded learning environment. Your fingers, rhythm, and inner hearing all come into play. The only thing I found difficult is to label what I hear, but improvisation made it a bit easier for me to recognise certain sounds*".

These results indicated that neither accompaniment exercises nor melody improvisations with peers in particular influenced the aural recognition and transcription of single chords without the musical context. However, Samantha clearly felt that piano improvisation was especially helpful for her: "*Yes, I got so many good tips for how to hear, for example, different intervals. And, at least, I progressed so much in my musical hearing by improvising...*".

Nevertheless, the various peer improvisations had a positive effect on most students' aural skills in general, which could be seen in the development of melody and the aural recognition of chord progressions, implying the value of learning the various theoretical elements in real musical contexts. Regardless of the existing aural skills and the progress of the training, most students acknowledged that the various improvisation exercises improved their musical hearing "...especially...the inner hearing", which could be observed in numerous peer improvisation situations, as Larry stated: "Yes...it's a really strong impulse to remember". Jodie added, "...I think it is not depending on styles of music". Harriet also emphasized, "That's how you can test whether you hear 'good things' in your head", even though her main focus was to develop her musical hearing: "The most useful tasks for me were the ones where we were supposed to listen to the chords played on the piano and, if I remember correctly, we did that in both groups [both phases]. But, maybe, more in the control group [non-improvisation phase of course]". Meanwhile, Zack's aural development could be observed more in the various peer improvisation exercises than in the written harmony tests. He felt that "... It [improvisation] exerts a positive influence on musical hearing. I personally like this kind of practice very much. My ears had great training and I have made good progress".

Some students also emphasized that improvisation not only helped but also presented some challenges, e.g. aural skill development. These students also emphasized that various other activities, such as singing and playing tasks and playing along with recorded music also affected their progress. For instance Pamela, who performed substantially well in certain aural tasks such as chords and melody transcriptions at the first phase of course, explained why she felt that the sing and play exercises affected her aural skill development more than the improvisation: "Yes [the improvisation is helpful]. But, when you play, you have to think of the harmonies then. Not just let the fingers go without thinking. For me, it is difficult to combine active listening and thinking ... playing the piano at the same time. In that sense, I think singing the chords is a better way to learn harmonies and improve inner-hearing". Nevertheless, she valued improvisation as a beneficial tool for grasping theory during the practice: "... of course the harmonies are nice to be heard (rather) than just to see them as numbers/symbols". Melanie, who had excellent aural skills was similarly uncertain that improvisation is the only tool for improving the aural skills: "I don't know. Probably yes, but I don't know how. Listening is always helpful, but maybe playing yourself and improvising helps you to learn what can and cannot be played in certain parts of a song, and maybe that develops your musical hearing".

These opinions seemed to be in line with students' rating of the usefulness of singing and playing tasks. Students of the Early IG appeared to have understood the usefulness of singing and playing in jazz, particularly in the first (improvisation) part of the course that received the highest rating. Furthermore, they generally found these activities very useful in baroque over the entire year. The Late IG students' interest and preference for singing and playing tasks gradually increased over the year and reached the level of the Early IG. Therefore, it could be concluded that the students felt learning harmony with im-

provisation was meaningful if other practical approaches were also integrated into the curriculum.

Overall, the harmony test results showed that all students developed their theoretical knowledge over the year, but many of them showed a high level of improvement in knowledge during the first part of the course. The students who lacked knowledge in music theory, e.g. the nomenclature in baroque and jazz, various chord markings, or the voice leading technique, also grasped the course material to a certain extent. Because most students had much stronger theoretical knowledge and practical skills in classical music than in jazz, the baroque material was much more familiar to them and they could rapidly build on their knowledge during the first part of the course. Most students could grasp the technique of analysing harmony by Roman numerals and realising chord progressions in writing from the figured bass, even though many students were unfamiliar with the figured bass. This also fostered the learning of jazz harmony especially related to certain techniques such as writing the chords of the jazz II-V-I chord progression in correct voice-leading or applying Roman numeral analysis for various chord progressions by listening. Students also progressed well in learning the jazz theory such as the various seventh chords with extensions and added notes. This could be seen in both chord writing and chord identification tasks using the lead sheet symbols. The students who studied jazz theory, jazz piano, or took the free piano accompaniment course learnt these elements of jazz theory much faster. Samantha, Zack, and Kathleen learnt the jazz chords at a slower pace than other students, and among them, only Kathleen succeeded very well in both writing and chord analysis tasks by the end of the course. Other students, regardless of the group, appeared to have acquired a solid knowledge in terms of jazz chords by the end of the first part of the course.

These results indicate that improvisation did not seem to be an exclusive tool for learning the basic chords of jazz and the lead sheet symbols, but the listening, singing and playing, and transcription exercises definitely fostered the learning of the chords and of their relationships with the chord markings. For instance, Elliot, who was the most interested in improvisation, emphasized the importance of practical approaches in the second half of the course that also developed his theoretical knowledge further: “... *learning the song Beautiful Love and experimenting with it a little helped me recognise and memorise some chords that I did not know before...*”. However, improvisation was a motivating tool for grasping these elements of music for both groups, e.g. learning the nomenclature of music, lead sheet symbols, Roman numerals, or figured bass.

5.6.14 Summary of overall progress and motivation behind learning harmony with and without improvisation

Overall, it could be concluded that the students’ knowledge of harmony in both styles improved notably over the entire year. However, their theoretical knowledge and practical skills developed differently within the two parts of the course. The differences were found in the genres, e.g. theoretical and aural tasks,

which were generally influenced by the students' starting level of knowledge and skills, based on their previous formal and informal music education and experiences in the various genres. Students' progress in learning harmony was also influenced by their motivations to learning harmony, the course material in both genres, and the applied approaches and activities, such as the improvisation activities at the lessons. Most students had spent a longer time studying classical than jazz music before the course, so the theoretical part of the baroque material was much more familiar to them, evidenced by the students' relatively high starting levels in the harmony tests. Nevertheless, not all of them could rapidly build on their knowledge during the first part of the course. In contrast, the jazz starting level did not clearly reflect the students' formal jazz education or their developments.

Meanwhile, students from the Early IG developed to very different levels during the first improvisation part; they generally seemed to have developed their theoretical knowledge during the first part with improvisation, whereas they seemed to have lost their motivation to learning harmony during the second phase. Elliot explained: *"... once you get into the improvisation, you may spend ... more time experimenting the phenomena. When you come up with your own ideas in different contexts, the learning experience is stronger, I believe"*.

In contrast, most students of the Late IG, regardless of their previous education, progressed well during the first part of course; e.g. Pamela remarked *"...in the control group [non-improvisation phase]. Because in the beginning everything was new and we got to know all the basics ... for example the II-V-I system as a part of cycle of fifths"*. Furthermore, the students further improved their jazz harmony knowledge and aural skills during the improvisation phase. Samantha, who lacked knowledge of music theory, in general, and had limited ability to play the piano, needed to establish solid theoretical knowledge during the first phase. Therefore, she pointed out that improvisation had helped improve her practical skills more than her knowledge of harmony: *"I think both groups were good for my development. In the experiment group [improvisation phase], I got more playing skills and helpful tips ... how to hear, for example, different intervals, really simple and usable for everyday playing. And that was a really good thing, but the control group [non-improvisation phase], perhaps, gave me more knowledge. Or, actually your teaching in both groups gave me much knowledge. So ... it is very hard to say which one was more effective."*

Kathleen had a similar point of view: *"I think piano improvisation is helpful, but it is also intimidating initially. There are so many rules that it seems improvisation is very difficult or not that fun. But with more knowledge about the style, it is much more profitable and enjoyable. ... improvisation, when learning jazz harmony is very helpful, it makes theories into tangible familiar sounds."*

Overall, it could be seen that the integrated course material consolidated the students' knowledge and practical skills so that they could apply it to the peer improvisation exercises. This was particularly important for the jazz, since students had less education in jazz in general, but especially for those students, who belonged to the Late IG.

Improvisation seemed to have been beneficial also in the first part of the course, but was especially applicable when certain theoretical knowledge and practical skills such as accompaniment skills were consolidated. For example, Melanie, who already had solid knowledge in baroque harmony at the beginning of the course, emphasized that with improvisation, *“Voice leading was clearer ... because we had to play ourselves and therefore think about it more”*, and improvisation helped her better understanding the theory for example, *“figuring out the bass lines [...] piano improvisation makes it more concrete and helps one to shift it to her/his own playing ... from playing to learning, it is easier for me to remember ... because one has to concentrate more on (for example) the use of leading tone in melodies ...”*. Nevertheless, she also stated that ... *“In the control group [second half of course], I learnt a lot of useful theory about jazz chords. ... more listening helps to perceive jazz harmony a lot”*. Zack, who had the least background knowledge and aural skills of all students still pointed out the benefits of improvisation, particularly in learning jazz harmony: *“[...] the experiment group [improvisation phase]. My knowledge of jazz improved more. My theoretical background knowledge is relatively low. The experiment group [gave] me more opportunities to practice”*.

Altogether, it could be concluded that improvisation was a general motivating tool to learn both baroque and jazz harmony in the combined course, but it seemed to have been more applicable if a certain level of theoretical and stylistic knowledge and practical skills were consolidated. Improvising melodies and harmonies with peers on baroque variations and jazz standards also increased the understanding of the structure of chords the functional relationship between chords in a chord progression and relationship between melody and harmony. The peer improvisation exercises also generally improved the students' aural skills but could not directly affect the written skills, especially the transcription technique as well as the ability to analyse a written musical expert from the score. Therefore, these skills needed to improve through other musical activities, which emphasized the relevance of integrated approaches to learning harmony.

5.7 Discussion of Study Two

5.7.1 Summary of the main findings

The main aim of Study Two was to explore how piano improvisation was able to contribute to students' development of both baroque and jazz harmony knowledge and aural skills in a harmony course that combined both styles and integrated various skill-learning approaches. The study also looked at what kind of elements contribute to making improvisation an effective teaching tool. The elements to be considered included students' existing musical skills, i.e. their previous formal music education and informal musical background, their motivation to learning harmony, their various skill developments during the course, and the applied peer and individual improvisation techniques and vari-

ous other music activities conducted at the lessons, such as playing along with recordings. The last aim of Study Two was to examine how both individual and peer improvisation skills developed in the classroom in both genres and determine whether the development of these skills was connected to students' pre-existing knowledge and musical skills, and how they added to the progress of learning harmony and aural skills during the research period.

The main findings of study indicated that improvisation, especially with peers, was a successful pedagogical tool that could be efficiently applied to the combined teaching of baroque and jazz harmony at the tertiary level. Improvisation, in general, helped improve students' knowledge of both baroque and jazz harmony over the entire course. However, the extent of progress made by each student was different, depending on the style, the individuals in the group, and the parts of the course in which the group performed improvisation as an additional activity. Students' existing theoretical and stylistic knowledge in both baroque and jazz, aural skills, piano skills, and experiences in improvisation strongly influenced the applicability of piano improvisation and the overall learning progress of harmony. Students' levels of knowledge of harmony and musical skills depended on their previous formal music education, i.e. the subjects studied, main instrument, informal learning experiences, cultural circumstances, the current major and minor studies at the university, and participation in informal music activities.

Improvisation motivated students to learn harmony in both styles because students could put their knowledge into instant practice. However, the timing of the improvisation exercises as additional music activity in the course differently motivated the students both for learning harmony and improving their various practical skills. Starting with improvisation was very beneficial for those students who had solid theoretical knowledge, sufficient piano skills, and more formal or informal experiences in improvisation. The students with more knowledge and musical skills could apply these easily to both baroque and jazz improvisation exercises, especially with peers. The students' existing knowledge helped them deepen their understanding of the stylistic features and use of harmonic progressions. The students who started the course with improvisation and had less knowledge and skills found it more challenging to take part in the group improvisation activities.

Whereas those students who had less theoretical knowledge and piano skills benefited more from the improvisation activities, when sufficient stylistic and theoretical knowledge and practical skills were established.

Practitioners such as Chyu (2004), Lee (2000), Sarath (2010), and Woosley (2012) agree that a certain level of theoretical knowledge is required for improvisation, and vice versa, improvisation also leads to a better understanding of music theory. Moreover, according to Randall (1993), improvisation is a tool that "closes the gap" between theory and practice. This was observed during the lessons when students explored the theory through the improvisations, and vice versa, i.e. attempted to apply the learnt theory to the improvisation. The students from the Late IG, who lacked theoretical knowledge and practical

skills were very highly motivated to acquire the lacking knowledge and musical skills during the first part of the course in order to be confident in improvising in the second part. The success of improvisation and the eagerness to participate in the improvisation exercises were dependent on the students' technical ability to play the piano. However, when they improvised together in pairs or in trios, they were able to share the various parts of music between each other, such as melody, bass, or chord accompaniment, either with two hands or one. Therefore, such peer improvisation activities can be applied even for teaching harmony to those students who are at the basic level of playing the piano.

Practitioners offer very different ways for teaching improvisation that depend on the style to improvise in and the style which musicians practise. Although improvisation is an integral part of jazz, it is still only a minor consideration in the context of classical music education either in individual instrument lessons or the general classroom lesson. A few studies have been devoted to exploring ways of teaching improvisation to classically trained musicians, for instance, Chyu (2004) and Woosley (2012) studied this in the context of classical pianists and Lee (2000), classically trained violinists. Chyu (2004) focused on repertoire-based piano improvisation in written compositions from the Baroque era through to the twentieth century, emphasizing the importance of reading and analysing notated examples but suggests learning the theoretical elements of music such as scales, intervals, chords, and rhythm patterns. These approaches are similar to the approaches to teaching harmony explored in Study Two, but in my study, the aural approaches were more emphasized. Lee (2000) focused on jazz improvisation and highlighted the aural approach through listening, copying, transcribing, playing and singing along, and using theory as a tool for extemporisation.

Sarath's *Music Theory through improvisation – a new approach to musicianship training* (2010) is a milestone work, which offers a comprehensive approach to learning music theory. It is designed for classical musicians, but it also helps broaden all musicians' understanding of harmony using improvisation. While the book presents improvisation on certain elements of music without stylistic boundaries, it also offers tips to improvise certain idiomatic chord progressions, such as II-V-I in jazz and cycle of fifths, in both jazz and baroque. The keyboard realisations of chord progressions are equally presented from both lead sheet symbols, Roman numerals and figured bass, and the various voice-leading and voice-doubling possibilities are also explained in various styles. Sarath's work also suggests improvisation exercises for students using their own instrument. In my study, the students played and sung and improvised exclusively using the piano. Nevertheless, my students came to the course voluntarily knowing the aim and topic and applied teaching tools such as piano improvisation. The students had different piano skills, so the improvement in individual improvisation depended more on each student's technical abilities, but this did not seem to be the case in melody improvisation development with peer accompaniment, since all students needed to concentrate on only one melody line. Therefore, the less skilled students could actively learn the improvisation tech-

nique in both styles on the piano with peers. Furthermore, students' remarkable development in theoretical knowledge, evidenced by their performance in the harmony tests over the year, indicated that the teaching strategy of having students improvise using only the piano did not place non-pianists automatically at a disadvantage in their learning progress of baroque and jazz harmony. Nevertheless, for those students who do not play the piano, these exercises may be performed with other instruments, such as guitar or other stringed instruments, in music teacher education.

5.7.2 The benefit of improvising with certain harmonic progressions in learning both baroque and jazz harmony

Understanding the functional relationship between harmonies within the harmonic progressions in both baroque and jazz styles can be approached from many angles, for instance, reading, playing, and analysing baroque opuses or memorising the jazz standard songs by listening. Certain chord progressions used in baroque seemed to have been common in numerous baroque variations as well as many of the jazz standard songs consist of the same chord progression pattern. For learning the repertoire in both styles, it is, therefore, important to identify those harmonic progressions that are used frequently in both styles. The cycle of fifth chord progression, or a part of it, can be found in a substantial amount of baroque and jazz standard literature as well as in popular music; hence, the concept is useful for bridging the gap between the harmonies in the two styles in both theory and practice (Tagg, 2003, p. 528). Since both baroque and jazz practices are based on improvisation, learning the stylistic features of harmony can be approached by improvising certain harmonic progressions. In classical music education, this practice is not as common as it is in jazz, but many efforts are being made to bring this approach back to the curriculum. Dolan explains his usual technique for preparing improvisations in a certain stylistic material: "...for instance when I am preparing for a concerto cadenza, I work through the piece very thoroughly, making harmonic reductions of all the themes". He explains further the benefits of this procedure on the stylistic knowledge of any musical genre: "By making harmonic reductions and improvising around them or choosing something different, for example, you can arrive a greater understanding of why a composer has made certain choices in the composition - and you understand this as living material" (1996/1, p. 13).

The idea of starting to learn improvisation with melody variations for any familiar tune by elaborating the melodies with particular ornaments is also suggested by Dolan (1996/3, p. 13), which is evaluated as a "nuts-and-bolts approach" by pressing in the pre-Baroque times (1987, p. 141). At the same time, in the early phase of jazz history, musicians of New Orleans bands also employed the same technique of "embellishing familiar tunes by paraphrasing and syncopating the melodies". In the subsequent improvisation traditions of jazz, the melody seemed to have relied on the underlying harmony and particular harmonic sequences such as II-V-I became the central elements of jazz improvisation (Monson, 2002, p.115). The approach to learning the various melody pat-

terns invented by the prominent jazz musicians, based on the various chord progressions, also became one of the basic approaches to jazz improvisation. Baroque keyboard improvisation in the 17th and 18th century also used a similar approach that “sets out patterns, models and procedures specific to the improvisation situation” described by pressing (*ibid.*) (see also Woosley, 2012, p. 36).

The benefit of melody improvisation activities on various baroque variations both alone or with peer accompaniment could be seen from students’ developments of improvisation in both the lessons and in the Late IG’s improvisation tasks. While jazz melody improvisations also showed improvement, the starting scores of baroque tests revealed the students’ lack of experience in this subject.

Melody improvisations were explored together with chord accompaniment, which played an important role in the peer improvisation exercises, since all the students regardless of the group needed to be able to play the chord progressions. Therefore, learning the basic technique of accompaniment motivated students to be involved in the various peer improvisation exercises, from which all students benefited in various ways. Some of the students could develop their understanding of theory, such as the voicing and voice-leading of chords within the chord progression, whereas for others, these exercises seemed to have been the first step to the peer improvisations. This way students with less piano skills were able to be involved in the learning progress that increased their motivation to learn either the music theory or develop their musical skills.

Altogether the accompaniment exercises generally increased the students’ practical ability to realise the chord progressions in both styles on the piano from either the figured bass, Roman numerals, or lead sheet symbols. These skill developments were strongly evident in those Finnish students’ cases who had learnt the free piano accompaniment course (*vapaa säestys*) in the University. However, not all of these students, who learnt free accompaniment seemed to have had mastery over chord progression voicing and voice-leading techniques or excellence in music theory before the course. However, it appeared that most of them had a general routine of playing the chord progressions “freely”, i.e. with different chord figurations. It was observed during the lessons that most of these students favoured particular rhythm patterns from the popular music. The students’ preference for the pop “style” was especially recognisable when they improvised “freely” without concentrating on the stylistic features of either baroque or jazz, for instance, improvising Pachelbel’s Canon in pairs. This phenomenon seemed to have been in line the current tendency of Finnish teachers to focus on teaching the pop and rock styles in the free accompaniment curriculum. (Rikandi, 2012, p. 29). However, free piano accompaniment “is not bound to any particular musical style”. The free piano accompaniment pedagogy should aim not only to teach students how to accompany songs from notated chord symbols but also to play by ear through listening and improvising in various styles, ranging from folk through baroque and classical to pop and jazz (p. 29). Nevertheless, the way my students learnt free piano accompaniment was unknown. Most of the students, regardless of learning free

piano accompaniment, also had solid informal experiences of accompanying other musicians on the piano in various popular and folk genres which contributed to their confidence in improvising certain “popular” clichés. Nevertheless, it could be observed that students having accompaniment experiences in either formal or informal settings easily involved themselves in the improvisation activities and were more familiar with the chord symbols, so this helped them learn the more complex jazz chords. At the same time, however, these students tended to not only overuse particular melody, rhythm, and chord patterns known from the popular music but also played the chords in particular voicing and voice-leading, had more difficulty to forget those clichés that they learnt and used for long time in various informal music activities. Rikandi also points the potential danger of how the recent textbooks approach free accompaniment by overemphasizing the various rhythmical patterns (*ibid.*); this way the free accompaniment cannot reach “individual emancipatory goals” and lose the potential to empower and liberate (pp. 29-30). However, this is a widespread and popular approach in music schools because it functions as an instant tool for learning accompaniments in various styles. Nevertheless, as soon as the students became familiar with certain chord progressions such as the cycle of fifth or II-V-I and themes of baroque variations and particular jazz standards, they could focus more on the stylistic traits in comping, which stressed the relevance of learning accompaniment.

Learning particular harmonic and rhythmic patterns is not a new phenomenon in jazz. The approach to learning certain “fixed musical ideas”, such as musical phrases, harmonic and melodic sequences “follows the traditional jazz tuition route” (Kingscott & Durrant, 2010, p. 135; Monson, 2002, p. 123), which also shows accordance with the majority of jazz theory and improvisation books including certain “riff-compendia” and “how-to-do-it books” that provide instant tools for improvisation (Pressing, 1987, p. 141). In the current harmony course, students learnt various chord patterns in both baroque and jazz that provided the frame for melody improvisations. However, these chord progressions were explored from existent musical opuses in various ways, rather than learning them as “ready samples” for accompanying and improvising. The students first learnt the variations of melody, bass, and inside voices through the polyphonic structure of baroque opuses, principally by listening to recordings or the piano played by me or other students. Students then sung and played back the various parts of music or played along with the recorded music, similar to the way early jazz musicians learnt from each other either by playing live or listening to recordings (Berliner, 1994, pp. 22-28; Kingscott & Durrant, 2010; Monson, 2002, p. 119).

The development of the comping technique and understanding and hearing the structure of chord progressions in terms of positions of chords, voicing, and voice-leading also helped students explore the melody improvisations not only with baroque material but also jazz. Monson affirmed that in jazz improvisation, it is especially important to hear the “underlying voice-leading as a scaffold on which many different kinds of patterns, scalar passages, and phrases

might be used. The swing of the rhythm section and the voice-leading of the bass and chordal instrument may play crucial roles in helping the improviser find harmonically and rhythmically satisfying ways to meet the demands of a particular tune" (2002, p. 125). Accordingly, the free accompaniment course curriculum either in Finland or worldwide, therefore, should offer particular specialisations in any musical style such as jazz or baroque. The music theory courses, which include certain keyboard skills, should offer a more comprehensive training to teach chord progression realisations from various chord symbols and include accompaniment and melody improvisations in the particular style.

The melody improvisation on both baroque and jazz chord progressions at the same time helped the students understand the relationship between melody and chord progression, for instance, fitting scales to the various extensions of jazz chords, which has been the dominant approach to learning jazz harmony and improvisation since the 60s (Monson, 2002, p. 123), or the role of leading tone of harmonic and melodic minor on the dominant chord in baroque music. The exploration of various arpeggios and permutations of chords together with the non-harmony notes developed the students' practical and theoretical knowledge of various chords as well as developed their ability to recognise these chords aurally. Embellishment techniques, both melodic and rhythmic, helped even the beginner improviser students to explore the various stylistic traits of melodies. This approach was also recommended by Woosley: "This will allow the student to take a short and simple musical idea and alter or expand it slightly" (p. 25). In Study Two, the student started to embellish the theme melodies of both baroque variations and jazz standards in various ways. They embellished the melody of the baroque theme using non-harmony notes (see also Woosley, p. 27) or varied the rhythm of the theme melodies of jazz standards in swing.

Since most of the students in my study seemed to have been more unfamiliar with the melody and bass variation improvisations with peer chord accompaniment in both baroque and jazz genres than with individual improvisations on the piano, these techniques were found to be beneficial in helping them learn harmony and encouraged the technically less skilled students to improvise in both styles. Students listened, copied, and developed musical ideas either from me or from each other. This method of learning is similar to the ways in which popular musicians learn from each other (Green, 2002), such as learning by ear, listening to recordings, copying each other's ideas, and improvising and composing together. My students for instance played call-and-answer exercises in duos and trios, and this activity challenged their aural skills. These exercises have been proven to be useful approaches to teaching improvisation and suggested by many practitioners, such as Apagyi (2008), Chyu (2004), Dolan (2005), Gonda (1996), and Sarath (2010). Nevertheless, the various peer improvisation activities in both genres are reminiscent not only of the basic attitude, as popular and early jazz musicians learnt from each other, but also of the common practice of musicians who composed and improvised together in the Ba-

roque era. This point stresses on the relevance of applying peer improvisation activities in the classical music theory and general classroom curriculum.

Learning baroque and jazz harmony combined and improvising together in a group, where different students had different levels of musical knowledge and musical skills also revealed to be challenging. The success of peer improvisation activities depended on who is paired or grouped with whom. Students with more skills had to be very patient and collaborative while improvising the various parts of music with the less skilled students. The collaborative learning process is well known in jazz history, since jazz musicians usually “collectively discover the process of improvisation” (Monson, 2002, p. 114). Rikandi (2010) also pointed out to the students collaborative attitudes and appreciation of learning from each other, when investigating the effect of peer-teaching and peer-learning activities on the learning community taking a free piano accompaniment course in a Finnish music academy: “Students drew inspiration from each other, and felt empowered by it” (p. 107). Furthermore, she received positive feedback from students about the benefits of learning together with people of varied backgrounds and skills. (p. 103). The students with more skills in Study Two also benefited from pairing with less skilled students, since what they played became more “clear” and simple in terms of structure of melody, and they played the chord accompaniment more consciously in terms of positions, voicing, and voice-leading of chords. Furthermore, their improvisation sounded more accurate in rhythm and pulse, which altogether positively influenced the overall performance of the group. This was especially observed when students improvised together without using play-along recordings. Despite of the positive effect of playing along with recorded music in the improvisation, which not only I but also Flack (2004) and Laughlin (2001) experienced, especially in terms of the swing feel, in Study Two, the students generally became more relaxed without it and more accurate in keeping the right tempo, rhythm, and pulse.

Nevertheless, the various peer improvisation activities helped develop all students’ musical hearing. A well-trained ear also generates improvisation, something that most practitioners such as Chyu (2004), Lee (2000), Sarath, (2010), and Woosley (2012) agree on. White (2002) stated, “The student who can improvise and compose a harmonic phrase using a secondary VII7 or an augmented six chord is better equipped to handle those sonorities in ear-training than the student who cannot do so. Similarly, the ability to write them, sing them, identify them by ear, or improvise them enhances a student’s ability to discover them and to perceive their meaning when they are encountered in examples from the literature” (pp. 7-9).

The practical use of chord progressions also fostered the aural recognition of various chords and chord progressions, such as the II-V-I and cycle of fifths; however, the students’ performance in these tasks in the harmony tests generally improved over the year. Similar to the chord accompaniment, melody improvisations on peer accompaniment enhanced the understanding of the stylistic features of harmony in both styles and the relationship between melody and

the given chord progression: the structure of chords, the non-harmony notes, or the fitting of scales to chords.

The melody improvisation also developed students' aural abilities to recognise familiar melody patterns that were related to the chord progression. Therefore, melody improvisation might have positively affected the melody transcription skills, but the improvement also depended very much students' existing aural skills and experiences with transcription. It seemed that the various exercises such as listening, memorising, singing, and playing by ear or from the score, playing along with the recording and score altogether influenced the development of the melody transcription technique. Likewise, the aural recognition and transcription of basic elements of harmony elements without the music context, gradually and moderately improved over the whole year, indicating that neither accompaniment exercises nor melody improvisations with peers, in particular, influenced the aural recognition and transcription of single chords without the music context.

Furthermore, the peer improvisation exercises generally improved the students' aural skills and did not directly affect the writing skills, transcription technique, understanding of nomenclature of baroque and jazz harmony, or the ability to analyse a written musical expert from the score. Improvisation itself was a motivating tool for acquiring these skills, which needed to improve through other musical activities. Listening, singing and playing, and transcription exercises definitely fostered the learning of chords and their relationships with the chord markings, emphasizing the relevance of integrated approaches to learning harmony.

The teaching material and the combined teaching of baroque and jazz harmony also played important roles in the development of the students' improvisation technique and the learning of the stylistic features of harmony. Students took ideas from the various opuses we had learnt and they applied these to the improvisations as well as their post-improvisation tests. Some of them even mixed ideas from both genres, for instance, they played the baroque variation in swing, or combined certain theoretical elements from both genres, such as the scale theory. Since musical quotations are implicit idioms in the baroque improvisation practice, a jazz improviser also quotes "a well-known tune or solo, which listeners familiar with the tradition may recognize with a smile." (Monson, 2002, p. 125). The students in the current study also used themes or recognisable phrases in the lesson improvisations, which they developed further.

The students' opinions about the benefits of learning baroque harmony together with jazz harmony as well as their various solutions to the cross-application of certain stylistic elements in the improvisation suggested the relevance of combining the two genres in harmony teaching and teaching improvisation in both styles combined. Therefore, harmony, music theory, and keyboard skill courses may consider combining certain styles in the curriculum, as suggested by the Comprehensive Musicianship approach (Rogers, 2004).

6 CONCLUSIONS

6.1 Summary of the research

The study of harmony is an essential part of music education with traditional variations in the approach to pedagogy at the advanced and tertiary levels, depending on whether the stylistic focus of the music is classical or jazz. As we have seen, these differences are based on the musical practices and musical sources (i.e. written, aural, or recorded) that are inherent to each particular genre. While classical musicians tend to learn harmony mainly from the score, jazz musicians usually use a more practical approach, involving a written version of the theoretical material in question or information that is listened to and copied from other musicians, so it can be directly used within a composition or improvisation (Monson, 2002; Creech et al., 2008). These differences are also reflected in textbooks, where we find classical and jazz harmony being approached in different ways that alter the shape of the music curriculum for both traditions.

Nevertheless, both the broadly classical (and especially the baroque) and jazz idioms have their roots in improvisation as common practice. In jazz, musical ideas are often sketched out and realised by improvising the written theme and chord progression, as indicated by lead sheet symbols. While improvisation is still considered a fundamental part of practising jazz today, it is generally neglected in the classical practise, performance, and music education, except the early music education and organ studies. However, for instance in the Baroque era improvisation flourished, with the figured bass (usually improvised on the harpsichord) providing the main shorthand notation for real-time compositions.

I have had a very strong motivation to study the differences and commonalities between jazz and classical practices and approaches to learning harmony. Before starting my doctoral research, I had been teaching classical music theory (for more than a decade), solfège musicianship, music history and literature, and piano for non-piano majors in jazz secondary (vocational music education)

and jazz tertiary music education. Furthermore, I had been leading both and classical and jazz vocal ensembles. In general, the students I taught came from very diverse musical backgrounds in terms of their knowledge of harmony, stylistic information, and musical skills. Therefore, it was important to find an area of common ground for everyone. As a result, I became interested in finding teaching material that would help students understand elements in harmony that were common to both classical and jazz styles. In this respect, I found certain chord progressions, from baroque variations, in particular, that could be linked to those in the jazz standard repertoire, and I wanted to evaluate the beneficial effect of practicing this material. The research also intended to explore the applicability of this material for teaching harmony in each style either separately or in the combined context. Furthermore, since improvisation activities were completely missing from my own classical music education, I became interested in exploring extemporisation mainly with my students at the piano lessons. For instance, students improvised the melodies or walking bass on my accompaniments and vice versa. Altogether, these ideas have played the seminal part in forming the objectives of my current research.

Therefore, the general broader aim of research was to identify ways of improving the curriculum for mainstream classical and jazz harmony studies at the tertiary level, by exploring and comparing the most applicable teaching methods, approaches, and tools. The primary aim of pilot study (Study One) was to identify the approaches that distinguished the teaching of harmony in each genre, and then examine their cross-applicability in a context that combined the genres. The study also looked at what kind of pedagogical approaches and tools could bridge the gap between the genres, such as the composition and improvisation. Students' previous experiences in music education, their motivations behind learning harmony, their preferences for various teaching approaches, their opinions about their challenges involved in various activities, and their progress made in learning harmony in both styles were taken into account and these were then compared with the researcher's own observations and evaluations.

Meanwhile, Study Two aimed to integrate the elements of musical practice shared by both genres and traditions and then assess how applicable these were for developing the knowledge of harmony in baroque and jazz and the relative musical skills. The presupposition as well as the outcome of Study One was that this genre gap could be bridged using the aural approach and piano improvisation techniques. Therefore, the main aim of Study Two was to explore the applicability of improvisation as a pedagogical method in combined teaching and determine how it may have a positive effect on the development of harmony knowledge and aural skills. The study also explored which particular elements of improvisation make it an effective tool for teaching harmony. The elements that were investigated included, among others, students' existing harmony knowledge and musical skills; their previous formal music education; their informal musical background; their motivation to learning harmony; and the development of the knowledge of various musical skills, such as improvisation

skills, aural skills, accompaniment skills, and individual and peer improvisation techniques. The last aim of this study was finally to examine how individual improvisation skills and melody improvisation with peers' accompaniment developed in both genres. Furthermore, how the students applied the learnt material, the stylistic and theoretical knowledge, to the improvisations during the research period was also observed.

The research also tested the teaching material in two cycles that combined baroque variations mainly from Pachelbel, Handel, and particular jazz standards, such as *Autumn Leaves* or *Take the 'A' Train*. The combined material provided frames for the various improvisation activities especially in Study Two. The basis of chord progressions on which student started to improvise were the cycle of fifth progressions that bridged the particular baroque opuses with the jazz standards.

The approaches and methods adopted were those that were the most applicable for combined teaching of baroque (classical) and jazz harmony at the tertiary level. These methods integrated the principal features of both styles to a certain extent and could, therefore, be used to bridge the gap between them. The activities included aural learning and practical live music activities, with particular emphasis on piano improvisation, especially with peers, and written composition exercises based on both baroque variations and jazz material. A combination of stylistic and theoretical strategies was found to be the most effective, i.e. using both real musical examples in a style as well as examples that focused only on the theoretical elements. Because the development of aural skills also had a positive effect on other musical skills, such as improvisation, it positively influenced the effect of other teaching methods (e.g. practical and score analysis approaches). As a result, the aural and practical approaches that placed emphasis on improvisation, were, overall, the most successful methods in such combined teaching of both classical (including baroque) and jazz harmony. A combination of these with score analysis could, to a certain extent, provide the optimal outcome, thereby emphasizing the relevance of an integrated course curriculum (Rogers, 1984; 2004).

Piano improvisation is a very complex musical activity that merges various musical skills and knowledge, such as aural skills, inner hearing, technical ability to play the piano, and stylistic and theoretical knowledge. Since the results of the research indicated that these skills could be developed with piano improvisation to a certain extent, improvisation was, in general, found to be a successful comprehensive approach to learning harmony.

In peer improvisation exercises, the students shared various parts of music between each other and with the teacher to develop their aural skills, by carefully listening to and copying other's musical ideas. Peer improvisation exercises enhanced students' expressions of musicality, sense of tempo, pulse, meter, and rhythm. Students also applied the learnt stylistic features of melody embellishment in the melody and bass improvisation by taking care of the melody phrasing, rhythmical traits, and musical form. Chord progression accompaniments and melody improvisations with peers helped improve their stylistic

knowledge in both baroque jazz genres, because these helped students delve deeply into the details of music and understand better the harmony and their roles in the musical context. Chord accompaniment seemed to have been especially beneficial to students' practical understanding of the positions, spacing, and voice-leading of chords in the harmonic progressions.

At the same time, in both the studies, it was found that stylistic piano improvisation in the individual context required not only a basic level of stylistic and theoretical knowledge but also a certain technical ability to play the piano. The development of individual improvisation skills, however, was measured only in Study Two, and it depended mostly on the students' existing level of piano skills.

Students found improvisation to be a creative approach to expressing their own ideas. They especially enjoyed improvising with peers as this helped them learn from each other. It motivated students to learn harmony in both styles because students could put their knowledge into instant practice. The students' harmony knowledge and various practical skills such as improvisation skills and aural skills showed improvement with the various peer improvisation activities when the melody, bass, and chord accompaniment were shared between students. Accordingly, improvisation, especially with peers, was found to be a useful pedagogical tool in learning both baroque and jazz harmony combined. Furthermore, owing to the apparent success and very positive feedback of peer improvisation activities from the students, it can be posited that improvisation is beneficial to the development of not only students' theoretical and stylistic understanding of harmony but also their general musicianship, aural skills, creativity, and musical expression. Improvisation activities should therefore be an integral part of music education not only for jazz but also for classically trained musicians.

The effects of the following supplementary practical music activities were also examined: listening to and playing along with a recording with or without the score, playing chord accompaniments, singing and/or playing the chord progressions on the piano, chordal and melody transcriptions, and in Study One writing variations on themes or chord progressions. In Study Two, the students appeared to have appreciated these activities to supplement their learning; particularly, the listening, singing and playing, and playing-along exercises were favoured. Meanwhile, students found the listening and singing and playing exercises beneficial over the year; they appeared to find the playing-along exercises useful in the non-improvisation phases of the course, since playing along was the closest they could get to improvising. This need seemed to have been even stronger in jazz than baroque, highlighting the significance of a practical approach to learning jazz harmony.

Nevertheless, students generally found learning harmony with improvisation meaningful if other practical approaches were also integrated into the curriculum. At the same time, compositional activities such as writing melody variations on either a baroque theme or walking bass on jazz II-V-I gave students in Study One the necessary encouragement to creatively apply their theoretical

knowledge in practice. Because some of the students from Study Two also had fewer experiences in improvisation, the written compositional exercises could have been applied in Study Two to supplement the piano improvisation exercises. The potential benefit of written variation composition exercises was discovered during the course, when students improvised in certain musical forms. The written composition exercises could have helped students to imagine and inner hear their improvised musical texture within a particular musical form. These exercises were not included in Study Two because I intended to use the same teaching approaches and tasks for both groups.

The students in both studies found learning harmony with the combined material from both baroque and jazz genres beneficial. They found the teaching material helpful for understanding the common and distinguishing elements of both musical styles and understanding the stylistic traits of harmony.

6.2 Limitations of the research and recommendations for further research

Because the research was planned to collect data through subsequent teaching courses, the action research methodology was chosen in order to continuously evaluate, re-plan, and re-evaluate the research cycles. Accordingly, this research consisted of two studies and the re-evaluation of the first research cycle resulted in certain new ideas for the implementation of the next research cycle. The second study was significantly longer in length, ran in two parallel parts with different activities for different participants, and targeted several aspects that emerged as important factors to be studied based on the findings of the first cycle. Hence, it was decided to treat the second study as the main body of the research.

Because this research dealt with music pedagogy at the tertiary level, fewer students participated in the data collection phases, bringing with them diverse musical skills and knowledge. This is a typical issue in the tertiary environment; therefore, the decision of choosing qualitative research techniques and examining the learning progress in each student's individual case seemed to be the best possible way of analysing the data.

Study One functioned as a pilot study and used qualitative research techniques. All the written comments of the students and teacher were transcribed and entered into the Hyper Research Software for qualitative content analysis; the video discussions were not entirely transcribed, and only the relevant parts were quoted in the dissertation. This limitation could have been corrected in Study Two, but according to the original plan of applying mixed methods as the research methodology, video discussions were not used as data sources.

Study Two originally intended to include a large number of participants and quantitative research techniques in order to measure students' learning outcomes quantitatively. Statistical analyses were planned for evaluating the

harmony tests, questionnaires, and students' improvisation tests and generating numerical data. Owing to the small sample size of the study, the data obtained were not sufficient for statistical analysis, so the analysis focused on qualitative data sources as well as the students' individual cases. Nevertheless, the numerical data were still valuable for evaluating each student's progress in harmony, improvisation, and other musical skills.

Because of the small number of participants in Study Two, the statistical group comparison, planned originally, could not be realised. If more students had joined the course, they could have been equally distributed in the two groups in terms of their theoretical knowledge and musical skills. According to the original plan, one group would have been the experiment group (improvised as additional activity) and the other, the control group over the entire year. I still recommend this design for future studies that wish to apply statistical methods for group comparison.

However, the change in design also had some important benefits. With the new design of each student going through both improvisation and non-improvisation phases, the students' learning experiences with and without improvisation could be self-evaluated, as they did in the FQ in Study Two. Thus, the limitation, i.e. students' learning harmony with improvisation as an additional music activity in the different parts of course, actually turned out to be very useful in providing data for examining how, why, and when improvisation motivated the students to learn harmony. Students from Study One also felt motivated to participate in the harmony course; however, in that course, improvisation was not emphasized. Most of these students reported at the beginning of the course that they wished to learn harmony more by ear and with practical music activities, regardless of style. Some of them remarked on the disappointing experiences of learning classical music theory through drilling and dry "paper-work" as opposed to the lively and creative activities they had learnt in jazz or pop music.

The students, who enjoyed the various music activities during the course, were more motivated to learn. However, while these comments supported the relevance of the practical approaches, such as improvisation (which was taken into account while designing the research questions and implementing Study Two), the new design of Study Two was even more useful for collecting direct comparative experiences at the individual level. The questionnaires enquiring about students' opinions on the various course activities during the harmony course in Study Two were particularly relevant for this purpose.

As discussed earlier, the changed plan of the applied research methods for Study Two made the data analysis more complicated. At the same time, these changed circumstances turned out to be beneficial since they provided insight into the students' individual development. For instance, the qualitative analysis of students' improvisation test performances helped determine the reasons behind the experts' ratings, enhancing the validity of the findings. The description of students as individual cases fostered a rich and elaborate dialogue between the various sources of data. In retrospect, I should have asked the expert evalu-

ators to provide not only numerical ratings but also written comments about students' performance in the improvisation tests; this would have helped me easily compare my qualitative observations with the experts' assessments. Alternatively, students could also have been asked to watch the video recordings of their progress in improvisation and discuss them in groups or listen to the audio recordings about their own test performances and evaluate them individually and in groups. Furthermore, students could have been asked to detail their opinions about their own development and the usefulness of the tasks over the entire year through learning diaries, which had been proven to be a valuable source about students learning progress in Study One. These sources would have provided even richer data about the students' own perspectives on how they applied the learnt theory and stylistic traits in their improvisations and how they would have self-assessed and/or peer-assessed the development of their improvisation and harmony skills.

Also, the comparison of the "numerical" and "qualitative" data related to the Late IG students' achievements of melody improvisation with peer accompaniment based solely on the experts' evaluation could have provided valid results. The main reason behind this was that students needed to improvise melodies in the same conditions in terms of the given chord progression, tempo, meter, character in style, character in rhythm, and the form of improvisation in both styles. Students also appeared to have started to explore melody improvisations at quite similar level in both styles, as observed at the lessons and in the assessments of pre-improvisation tests. The baroque pre-melody improvisation test results were more similar among students in terms of both starting levels and level of development than the jazz results, suggesting the relevance of melody improvisation on a given chord progression, with the accompaniment provided by peers, as a successful teaching approach in baroque harmony. Therefore, it is recommended to further examine and apply this approach in harmony and music theory courses for both mainstream classical and jazz music education not only at the tertiary level but also beginner level.

The research also tested students' progress in improvisation in various conditions such as individually and with peer's accompaniment. Four criteria were chosen as guidelines for the evaluation of improvisation test-tasks. Two aesthetic criteria, *musicality* and *originality*, were defined by the researcher, similarly to the consensual assessment techniques quoted in the study. However, because the improvisation was tested in both baroque and jazz genres, two stylistic criteria, *awareness of rhythm and form* and *melody, phrasing, and embellishment*, were also added in the evaluation. Expert practitioners in the field (piano pedagogues, one theorist and one musicologist) were involved in the evaluation process. They were asked to use their own standards for rating the recordings of the students' improvisations. Because the development of the improvisation techniques was tested in relation to the development of harmony knowledge, the ratings of each criterion were looked at broadly as contributors to the outcome of harmony knowledge. Although the development of the stylistic sense in terms of melody phrasing and embellishment in the peer improvisation con-

text showed a relationship with the development of only a few students' melody transcription techniques, it may be worth considering to further investigate this relationship. Furthermore, testing the stylistic improvisations in more detail in both styles is also recommended according to these or similar assessment criteria; however, it is recommended the segments of the latter two criteria be treated separately as a) *melody phrasing*, b) *melody embellishment*, c) *rhythm*, and d) *form*, in order to get more elaborate findings.

6.3 Role of the researcher

Compared to Study One, in which students had "a stake in the problem under investigation" and solved these problems together with me as the teacher-researcher (Herr & Anderson, 2005, p. 4), Study Two involved less input from the students in investigating the problem and focused more on the evaluation of the efficacy of the teaching tools in helping students achieve their goals in learning harmony. However, in action research, the "collaboration and participation is crucial" even in a case where a lone practitioner is studying his/her own practice; participation or at least on-going feedback should be sought from other stakeholders in the setting or community in order to ensure a democratic outcome and provide an alternative source of explanation (Herr & Anderson, 2005, p. 4). Therefore, those issues listed above i.e. obtaining richer data from both evaluators and students stakeholders could be explored in more detail in further research according to the action research design.

In retrospect, taking into account my research-based teaching courses and the many years of experience teaching in a jazz conservatory, I can conclude that the entire teaching process is a kind of an action research. Teachers of such practical music subjects need to evaluate the teaching and course plan every semester and after every lesson. Considering that students' individual development does not always show continuity over the semester and even within a lesson, students' performances may vary significantly, teachers can automatically generate numerous cycles of "plan-action-observation-reflection" process even during the lessons. In addition, because teachers observe and evaluate students' learning progress as well as assess students' achievements (e.g. giving grades) in the music theory classes mostly alone without involving "outsiders" in the evaluation process, I believe that we teachers are prone to being biased and subjective. The bias and subjectivity are acceptable components in action research since we teacher-researchers "all enter research with a perspective drawn from our own unique experiences and so we articulate to the best of our ability these perspectives or biases and build a critical reflexivity into the research process" (Herr & Anderson, 2005, p. 60). The dilemma of avoiding bias and enhancing the trustworthiness of research can be solved by involving self-reflection and the input of others in the evaluation process. Therefore, this research took on board "independent" experts for evaluating students' improvisation performances, similar to the keyboard examinations held at conservato-

ries, where along with my suggestions, my colleagues' assessments of students' performances were taken into account when awarding them their final course grades. However, the decisions (actions) about the music material, teaching approach, or task to be performed at the lessons were based on my own critical observations.

In cases of both Study One and Study Two, the students' enthusiasm was evident. The phenomenon was observed during the lessons in most students' cases, who participated voluntarily in the course. It is unknown whether the grades (credits) offered reinforced the students' motivation to join the course, but since university students are usually familiar with the nature of the research and the importance of practitioner-research projects, some of the students would have taken up the course even if no grades (credits) were offered.

Despite these limitations, the study provided a valuable contribution, particularly because of the detailed observations made at the level of individual students. Therefore, the analysis procedure, including the changes in research design, eventually, became very beneficial for me as an experienced teacher, but less experienced researcher, in order to develop my research skills. Herr & Anderson (2005) also emphasized, "developing the skills and habits of self-reflexivity is necessary for any action researcher" (p. 60). Nevertheless, I personally believe that the development of my self-reflexivity as well as the whole research process altogether helped develop my teaching skills.

6.4 Implications for pedagogy

6.4.1 Role of the practical approach and piano improvisation in the combined teaching of baroque and jazz harmony

Teaching harmony at the tertiary level can be approached from many angles, such as aural recognition, score analysis, or various practical (live) music activities, for instance, playing and singing with the piano, improvising, and composing. Theoretical elements and concepts as well as the stylistic features of harmony from different eras can be focussed on. The different approaches to learning harmony involve theoretical knowledge and a variety of musical skills with a special emphasis on aural skills and inner hearing. Practical skills, such as playing the piano, sight-reading, and score writing (both dictation and transcription) are also required. This research found those approaches successful to teaching baroque and jazz harmony combined that involved various live musical activities, such as piano improvisation and aural learning. However, the findings also suggested the healthy balance should be maintained between concept learning and score analysis.

Meanwhile, in jazz education, most studies on different teaching methods have commonly investigated the subject from the perspective of improvisation in the classical music context, with a focus on aural, score-reading, or score-writing skills, as these are considered to be linked with other achievements, e.g.

keyboard-playing skills or music theory. Interestingly, even though most of the studies investing the development of various skills in integrated classical music theory classes at the tertiary level have incorporated many elements, only one skill was seen to really improve (no study has specifically explored piano improvisation). For instance, Brown's (1990) findings indicated that the kind of piano training that included playing harmonic and melodic exercises by ear significantly improved students' aural comprehension skills, such as melody and harmony recognition, transcription, and melodic/harmonic playing by ear. Meanwhile, when Bogard (1983) tested first year college students' development in various musical skills that were integrated into theory instruction, such as ear training, sight singing, and piano playing, significant progress was seen only in the students' functional piano skills. Similarly, Humpreys' study on the "Harmonic Skills Program" (1984), i.e. learning piano accompaniment techniques such as simple tonal melodies to go with simple chord progressions, showed no clear evidence that any skills other than accompaniment skills had improved. In spite of these results, both Humpreys and Brown recommend the inclusion of aural learning (playing by ear) in traditional piano and music theory training. Humpreys suggests that improvising with chordal accompaniments has a positive effect on harmonic, aural recognition, and performance skills.

In contrast, the investigations in Study One and Two of the current research showed improvements in more than one skill set, namely the aural skills, piano skills, transcription technique, writing skills, score analysis, and improvisation. The results also suggested that focusing on aural learning and applying piano improvisation, especially with peers, in such integrated harmony courses will lead to favourable learning outcomes.

The results of present study are in line with certain curricular trends and philosophies that Rogers (2004) has presented, i.e. enhancing comprehensive musicianship, integration of aural skills, and focusing on skills instead of concepts in learning music theory. However, in the classical and jazz harmony context, at least, these curricular plans seemed to function the best when integrated with others to maintain a healthy balance between not only the conceptual and practical but also aural and written skills. Integrating approaches and combining elements from both mainstream classical and jazz harmony pedagogies seemed to have been generally successful among students in both studies. In addition, the present study not only looked at integrating various teaching approaches and skills in teaching of harmony but also looked at integrating two musical styles, i.e. baroque and jazz.

6.4.2 Benefits for the classical music pedagogy

Learning harmony combining both baroque and jazz genres and improvising certain chord progressions from both genres were beneficial approaches to understanding the stylistic features of harmony and provided a solid bridge between the two styles as well as functioned as motivating tools for learning harmony in general.

Improvising the melodies and bass on various baroque variations and jazz standard songs on peers' accompaniment as well as improvising the accompaniment on peers' melodies based on musical excerpts improved students' improvisation skills; piano accompaniment skills; and understanding of the stylistic traits of both styles in terms of harmony, melody, rhythm, and form. Improvising this way together in duos and trios also improved their aural skills and collaborative attitude, both required for students who aim to become performing musicians or music teachers.

The students' preference for such peer improvisation activities, therefore, suggests that it might be helpful to include these techniques into the mainstream classical music curriculum, the teacher education, and the music theory curriculum at the tertiary level. Also, the outcome of the research warrants further investigation of the applicability of peer improvisation in learning harmony in mainstream classical music education, such as harmony from the Baroque, Vienna Classical, or Romantic period. In this way, the research would be able to bring improvisation back into the classical music education and classical performance practice.

Classical music theory courses as well as the majority of harmony books focus on part-writing and keyboard realisation of musical texture that place emphasis on voice-leading. Harmony books which provide a more comprehensive approach to these techniques (such as integrated and CM approaches detailed in Chapter 2.5.1-2.5.2) and include part-writing, keyboard harmonisation, and various composition exercises are suitable for melody, bass, and accompaniment improvisation.

6.4.3 Benefits for the jazz music pedagogy

The research findings also have implications for jazz education. In my teaching experiences at the Hungarian jazz secondary (vocational) and tertiary education levels, the students, in general, came from more diverse musical backgrounds, than the students who participated in the combined harmony courses in the current research. The background of the students in this study referred to previous jazz and classical music education. With regard to previous classical music education, the students' education ranged from strong conservatory training to basic formal classical training, whereas in the case of jazz, students had received training in both formal and informal settings at various levels and, in many cases, also received training in popular music. Because certain classical subjects, such as music theory and piano for non-piano majors, are compulsory components not only in the Hungarian jazz tertiary curriculum but also in many jazz programmes world-wide, exercises involving composing variations or improvisations especially with peers on baroque variations would be able to show the more practical side of working with the traditional elements of baroque and classical harmony, such as learning the voice-leading techniques. Therefore, it is hoped that these practical exercises motivate jazz students more to learn the stylistic features of harmony from the Common Practice period.

6.4.4 Implications for the keyboard pedagogy

The practical benefits of integrating keyboard studies into music theory teaching are certainly undisputable (Rogers, 2004, p. 69). Music theory traditionally includes keyboard studies because it is the practical tool for realising harmonic progressions. However, the curricular trends of music theory at the classical tertiary level may vary in focusing either on keyboard skills or the concepts. Similarly, in many countries, the compulsory piano classes stress on technical playing skills, whereas others underline the importance of the practical application of music theory through accompaniment and improvisation.

Because the research was conducted in a Finnish university, it is essential to note that the Finnish tertiary curriculum for music teacher education typically includes a “free piano accompaniment” (vapaa säestys) course that aimed not only to teach students how to accompany songs from notated chord symbols but also to play by ear through listening and improvising in various styles, ranging from folk, baroque, and classical to pop and jazz. Also, another aim of such piano instruction is to ensure that music theory and ear training become part of the practical training (Rikandi, 2012, pp. 27-30). Furthermore, it recently became popular as group instruction in the piano-laboratory environment and fosters learning from peers as well as playing and improvising in pairs, as opposed to conventional one-on-one instruction. The results of Study Two, especially in terms of peer improvisations, suggest ideas that can be implemented in the Finnish free piano accompaniment curriculum, especially at the advanced level. In these courses, students are able to deepen their learning of the attributes of certain styles, e.g. baroque or jazz. Also, future studies on this topic would benefit by executing the course in the piano-laboratory environment, as it would provide more opportunities for students to improvise with their peers, i.e. students or teachers. However, this is highly dependent on the availability of such facilities at the institutions.

On the other hand, the inclusion of more improvisation techniques in general would result in a more refreshing music theory curriculum in Hungarian classical tertiary music education. In Hungarian music theory classes, piano skills have always been stressed on for realising the learnt harmony progressions; therefore, creative approaches, such as composing and improvising variations on the given chord progressions, would help bridge the gap between various musical eras and practices. However, in Hungary, the compulsory piano courses are traditionally taught on a one-on-one basis, with emphasis placed on the performance of written compositions in both tertiary music performance and music teacher education and for specific studies, including the reading and transposition of orchestral and choir scores. Therefore, the peer improvisation techniques that were employed and explored in the current research would be suitable pedagogical tools for such piano courses.

6.4.5 Practical suggestions for improvising melody variations with peer accompaniment

Herein, I shall provide some suggestions on exploring peer improvisation techniques on the piano that were used and developed in this research. The basic approach is to improvise variations both melody and bass as well as use the chord progressions as an accompaniment, especially in keyboard voicing. Depending on the subject area, e.g. music theory, solfège-musicianship, or keyboard lesson, the peer improvisation can be approached from the exploration of the chord progression with or without a separated bass or from the melody and bass, which the teacher or musician can freely choose. The main aim is to combine the chord progression accompaniment with the melody improvisation in order to connect the melody to the given harmony; therefore, any suggested steps from either the chord accompaniment or the melody can be applied immediately together with the other. The teacher and student(s) are encouraged to change parts of the music according to the student's technical level of playing the piano. For instance, in the chord progression improvisation, the bass can be separated from the upper voices of the keyboard harmony. The following list is not exhaustive but follows a relative sequence that can be treated freely and combined or developed with the participants' individual ideas. Furthermore, the listed approaches take baroque variations as musical examples, but these can be employed in any other musical style, depending on the subject area.

I. Approaching improvisation from the chord progression using it as accompaniment for peer improvisation

1. Making harmonic reductions of certain musical excerpts by using, for instance, baroque variations or the "ready" chord progression sample
2. Playing the chord progression in various positions and voicings, paying attention to the voice-leading
3. Playing the chord progression in various positions and voicings in free voice-leading
4. Embellishing the chord progression's melody (soprano voice) with diatonic non-harmony notes such as higher and upper neighbour notes, auxiliary notes, passing notes, turns, suspensions etc.
5. Playing the chord progression in various meters, rhythmical patterns, arpeggios similar to the original musical excerpt
6. Varying the bass rhythm according to the given character of musical excerpts, such as baroque variation
7. Embellishing the bass with diatonic non-harmony notes such as higher and upper neighbour notes, auxiliary notes, passing notes, turns, suspensions etc.
8. Playing the chord progression freely in various meter, rhythmical patterns, arpeggios similarly to the original musical excerpt

II. Approaching improvisation from the melody and/or bass improvising variations with peer accompaniment

1. Reducing the theme melody and/or bass of certain musical excerpts by using, for instance, baroque variations or the original theme melody
2. Elaborating the simplified melody and/or bass: improvising melodic variations by using chord figurations or diatonic non-harmony notes such as higher and upper neighbour notes, auxiliary notes, passing notes, turns, suspensions etc.
3. Elaborating the simplified melody and / or bass: improvising melodic variations by using chord figurations or using both diatonic and chromatic non-harmony notes
4. Reducing or simplifying the more elaborate (original) melody and / or bass such as to the chord tones i.e. the roots and fifths of the chords
5. Elaborating the rhythm according to the given meter and character of musical excerpts, for instance, with dotted rhythm, triplets, or syncopation
6. Simplifying the rhythm according to the given meter and character of musical excerpts
7. Varying the melody and bass from the suggestions no. 2-6 combined
8. Varying the melody and bass freely with rhythm and melody embellishments in various meters and characters of music

6.4.6 Suggestions for non-pianists

Music teacher education would benefit from including improvising certain chord progressions on the piano with peers. Moreover, because many teacher education curricula, for instance, Finnish music teacher education, involve not only the piano but also the guitar and in the programme (some programmes use even the accordion), students would be able to improvise on chord progressions in the classroom on the piano or guitar, or on both instruments combined. This way, students with low-level piano skills would be able to be involved in these activities. In addition, besides the keyboard, stringed instruments such as harps or zithers, or percussion instruments (particularly Orff instruments) could be used as substitutes to the piano and guitar as chordal accompaniments. The latter example has been explored in the jazz Orff music education classroom environment by Goodkin, (2007; 2012). Furthermore, other solo instruments such as woodwinds and horns and singing could be also included in group improvisation activities, as suggested by Sarath (2010).

Other supplementary practical activities, such as playing along with the recording, were also found to be effective teaching tools in both baroque and jazz styles. However, the students' appreciation of play-along activities seemed even stronger in jazz than in baroque, underpinning the significance of a practical approach to learning jazz harmony. Playing along with the recording and also with score is a well-known technique in jazz education, whereas in classical music education, these techniques are almost unknown. However, playing

along either melody or bass variations of certain baroque variations from recordings either with or without a score fosters the technical piano playing skills as well as develops the inner hearing and sight reading skills. Therefore, it is recommended that these activities be performed as part of a hands-on supplementary approach to learning the stylistic features of harmony and melody in both mainstream classical and jazz education contexts.

6.4.7 Implications for the classroom pedagogy

The results from each of the courses in Study One and Study Two showed that learning harmony both individually and as a group in the classroom, had advantages and disadvantages. The classroom environment was generally very suitable and “economical” for tasks such as listening, memorising, singing, writing, transcribing, or analysing, and it gave students the opportunity to also learn from their peers. However, the prospect of a virtual medium (via the Internet) providing an informal context for individual instruction has been highlighted by Rogers (2004) and White (2012). When Rogers (2004, p. 154) talks about the most important teaching strategies in classroom instruction for music theory, he emphasizes the importance of students’ different backgrounds when presenting a new topic to a class and their physical and mental condition at the time. Therefore, he suggests a spiral or sequenced form of teaching to ensure a better grasp of the new information.

Music theory textbooks or online tutorials can definitely help students grasp the missing theoretical knowledge and skills they need, but a creative, flexible, and skilful teacher in the classroom is perhaps the best means for reducing the disparities between students by capitalising on their greatest achievements which they can share with others. Indeed, one of the biggest and most rewarding challenges in this research was handling the diversity of skills, knowledge, and ways of thinking among the students who participated; the differences in the levels of theoretical knowledge and musical skills are natural components of higher and tertiary education. In this respect, the demands of this research that ideally required a comparison of similar tasks were sometimes at odds with the demands of teaching that ideally required greater differentiation in tasks, yet a balance was achieved. This kind of interaction between individual students, peers, and teacher is, as yet, not so easy to recreate online. For example, I found certain practical activities to be a good way to present new materials to students at a range of levels and practise material during group lessons as well. Rogers (2004, p. 156) has already drawn attention to the “underdeveloped idea of using students as teachers” which was an early version of the peer-teaching and peer-learning learning approaches in the eighties. In my own harmony courses, the group singing, piano playing, playing along to recordings, and improvising together served the same purpose as this kind of peer instruction. As teacher and students, we could share our concerns, knowledge, and possible solutions with each other via the language of music.

Improvising on the piano proved to be particularly challenging in a group situation, in terms of keeping all the students involved in the activity. To this

end, one of the most effective and time-saving activities was to have students improvise with only one hand in duos or trios and to have them take turns to play the different voices. This way, everybody had the opportunity to play all the parts of music. In the optimal scenario, the classroom set-up can have more than one keyboard, or the harmony course could take place in a piano-laboratory environment. Therefore, students could easily try improvising on the keyboard for themselves, either individually or in groups.

6.4.8 Encouragement for practising improvisation for the classically trained musicians and teachers

Considering students' motivations behind learning harmony with improvisation, especially with peers, and the general success of these approaches in learning harmony in both the phases of this research, the wider application of these activities should be considered for classical music education in general and for classical harmony and music theory studies at the tertiary level. However, the inclusion of improvisation in the curriculum, *per se*, is not sufficient. Numerous curricula specify certain "creative" activities, such as composition and improvisation for general music studies, even for the classroom settings. However, teachers constantly make excuses for not using these activities, principally highlighting the lack of time for delivering the lessons. Moreover, although there is an overwhelming amount of teaching materials, books, computer programmes, and online tools in the market dealing with improvisation at least in the jazz or popular music context, teachers tend to use a limited amount of methods and tools for teaching improvisation. Indeed, there is still a relative lack of teaching material for improvisation techniques for mainstream classical music studies. In classical music education and professional performance training, improvisation is still a relatively neglected activity, except in the cases of organ and harpsichord studies. At the same time, many classically trained musicians and general classroom teachers wish to teach improvisation but are not certain about doing so because they lack the necessary skills. They wistfully see jazz musicians practice and wish to acquire similar skills. However, they feel that because improvisation was missing from their music education (as in the case of my own classical music education), it is late to start learning. Also, some of them have negative experiences from their childhood, as some students in Study One did in the current research. However, Woosley (2012) states that "the teacher does not need to be a professional improviser, but must understand the basic concept of improvisation" (p. 65).

Music theory teachers and solfège-musicianship teachers are especially encouraged to explore some form of improvisation as well as compositional exercises. It is important to remember Miles Davis' quote: "Do not fear mistakes – there are none". For this reason, I recommend the step-by-step inclusion of improvisation exercises in their daily practice and teaching, such as playing together with the students, such as improvising simple variations. This can be done either on a one-on-one basis or in the classroom setting with various in-

struments, instrument teaching, traditional piano lessons, or piano-laboratory lessons etc.

The classical curriculum should be improved together with the music teachers and vocational music teachers' training in order to produce teachers who have sufficient improvisation skills. These teachers would then be able to execute those curricular changes by employing improvisation and composition activities in the lessons. They would not only be able to make the lessons more colourful but also be able to motivate the students to learn harmony.

YHTEENVETO

Pianoimprovisaation rooli harmonian opetuksessa käyttäen yhdistettyjä materiaaleja barokin ajalta ja jazzin perusvalikoimasta: kohti kokonaisvaltaista lähestymistapaa

Kolmannen asteen musiikkikasvatuksen harmoniaopetuksessa sovelletaan perinteisesti erilaisia käytänteitä klassisen ja jazz-musiikin aloilla, perustuen tyylinmukaisiin, tiettyinä aikakausina kehittyneisiin piirteisiin ja ilmaisuihin. Näillä tyyleillä on kuitenkin myös lukuisia yhteisiä piirteitä, ja tämän tutkimuksen tavoitteena oli tunnistaa ja integroida sellaisia musiikillisen toiminnan elementtejä, joilla voidaan edistää barokin ja jazzin yhdistettyä harmoniaopetusta. Tutkimuksen päätavoite oli tutkia pianoimprovisaation soveltuvuutta mahdollisena pedagogisena välineenä barokin ja jazzin harmonian yhdistetyssä opetuksessa, ja selvittää millä tavoin se voi tukea harmoniatuntemuksen kehittymistä ja erilaisia musiikillisia taitoja. Toimintatutkimuksen periaatteita noudattaen tutkimus toteutettiin kahdessa syklissä, ja aineisto kerättiin kahdella peräkkäisellä suomalaisille yliopisto-opiskelijoille suunnatulla kurssilla. Molempien tutkimus syklien aineiston analyysi toteutettiin kvalitatiivisin menetelmin.

Tutkimus Yksi oli pilottitutkimus, johon osallistui seitsemän opiskelijaa ja joka tarkasteli sitä millaiset lähestymistavat olivat oppilaiden ja opettajan mielestä kaikkein toimivimpia yhdistetyssä harmoniaopetuksessa. Opiskelijoiden aiempia kokemuksia sekä kurssin aikana tapahtuvaa kehitystä ja harmonian oppimisen haasteita käsittelevä aineisto kerättiin kyselylomakkeilla, oppimispäiväkirjoilla, videoinneilla ja harmoniatesteillä, yhdistäen niitä tutkijan havaintoihin vertailevassa analyysissä. Tulokset osoittivat, että käytännön harjoitukset, kuten improvisaatio, variaatioiden säveltäminen ja kuulonvarainen oppiminen hyödyntäen olemassa olevia musiikkinäytteitä, olivat erityisen menestyksellisiä yhdistetyssä opetuksessa.

Tutkimus Kaksi tarkasteli pianoimprovisaation soveltuvuutta yhdistetyn harmoniaopetuksen opetustapana. Yhdeksän opiskelijaa jaettiin kahteen ryhmään, jotka opiskelivat harmoniaa improvisaation avulla kurssin eri vaiheissa. Harmoniatesteillä mitattiin opiskelijoiden harmonian tuntemusta ja kuulonvaraisia taitoja. Improvisaatiotestien äänitteistä mitattiin opiskelijoiden improvisaatiotaitoja itsenäisesti ja yhdessä säestyksen kanssa. Oppituntien videotointiin perustuvan observoinnin avulla tarkasteltiin opiskelijoiden oppimisprosessin kokonaisuutta ja musiikillisten taitojen kehittymistä. Opiskelijat myös ilmaisivat kyselyiden kautta mielipiteensä harmonian opiskelusta improvisaation avulla ja ilman sitä. Koko aineisto analysoitiin erikseen jokaisen oppilastapauksen kohdalla ja esitettiin narratiivina kunkin oppilaan oppimisprosessista, ja päätelmiä johdettiin kunkin tapauksen pohjalta.

Tulokset osoittivat, että improvisaatio, erityisesti vertaisopiskelijoiden kanssa toteutettuna, vaikutti myönteisesti opiskelijoiden teoreettiseen ja käytännölliseen tietämykseen sekä barokin että jazzin harmoniasta ja heidän kuulonvaraisiin taitoihinsa. Kuitenkin myös opiskelijoiden aiempi harmoniatunte-

mus kummassakin tyyliässä, heidän aloitustasonsa kuulonvaraisten taitojen, improvisaatiotaitojen ja pianonsoittotaitojen osalta ja improvisaation ajoitus osana kurssia vaikuttivat oppimisprosessiin. Improvisaatio osoittautui hyödyllisimmäksi harmonian oppimiselle silloin kun tietty määrä teorialuntemusta, kuulonvaraisia taitoja ja pianonsoittotaitoa oli jo alustavasti vakiinnutettu. Opiskelijat olivat motivoituneita oppimaan harmoniaa improvisaation kautta ja barokin ja jazzin harmoniaa yhdistettynä.

Asiasanat: harmonia, barokki, klassinen, jazz, kolmannen asteen musiikkikasvatus, improvisaatio

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 Fly Me to The Moon, Play-Along
https://www.youtube.com/watch?v=hfF_qh89hA8
 Take the 'A' Train, Play-Along
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APPENDICES

APPENDIX A

Study One:

Pre Questionnaire

1. In which music institution do you study?

JAMK/ JYU?

.....

2. A. If you study in JAMK, What is your main instrument?

(instrument, singing, conducting etc.)

.....

2. B. If you study in JYU, what is your main subject?

(e.g. music education, musicology etc.)

Also what do you consider to be your main instrument?

.....

3. Which academic year will you commence?

(1st year, 2nd year etc.)

.....

4. What kind of musical training did you attend in your main instrument before your current studies? Tick more if needed.

Music School (musiikkiopisto): emphasis in classical music

Music School (musiikkiopisto): emphasis in Pop/Jazz

Secondary level music studies (mus. alan toisen asteen opinnot): Classical

Secondary level music studies (mus. alan toisen asteen opinnot): Jazz

Tertiary level music studies (mus. alan ammattikorkeakouluopinnot):

Classical

Tertiary level music studies (mus. alan ammattikorkeakouluopinnot):Jazz

University music studies (mus. alan yliopisto-opinnot)

Main subject:

.....

Other (e.g. private lessons):

5. How many years have you studied classical music before the current studies?

.....

6. How many years have you studied jazz music before the current studies?

.....

7. How many years have you studied Theory of Music?

Classical:.....

Jazz:.....

8. How many years have you studied solfège ?

.....

9. How many years have you studied piano (also piano for non-piano majors)?

Classical:.....

Jazz:.....

10. Have you sung in a choir?.....

If yes, how many years and in what kind of choir(s)?

.....

11. If you have Classical main instrument, have you ever learnt improvisation?

How many years of instrumental?.....

Vocal?.....

12. Are you familiar with the Relative Sol-Fa/Moveable - Do/Tonic Solfa System (known from Kodály Concept or Orff Method)?

.....

Questionnaire 1

1. How did you learn harmony in general during your previous music studies?

- by analysis from score?
- by aural recognition?

2. How did you learn classical harmony (including Baroque or Romantic)?
3. How did you learn jazz harmony?
4. Where did you learn classical or jazz harmony ? (e.g. school, group/ individually, private lesson, self study etc.)
5. What was your intention or aim to learn that particular style of harmony? (E.g. concert, gig, audition to a school or institution, general interest etc.)
6. If you learnt both classical and jazz harmony, what did you think the main difference or differences between those approaches?
7. Which way or ways did you feel the most effective in learning harmony in a particular style?
8. Which way or ways did you enjoy learning harmony the most?
9. What changes would you suggest in the approaches to learning harmony in a particular style?

Questionnaire 2

- 1. Which way or ways do you prefer to learn Jazz harmony?**
(tick as many as it needed)

A/ Analysis from score:

- Reading and analyzing the store of jazz chords from the lead sheet symbols while playing the chords on the piano or any instrument:
- Reading (playing or singing) a jazz tune from lead sheet and learn the chords from it:
- Reading and analyzing the jazz chords form a "Tutorial software" or theory book and practicing (drilling) them:
- Reading (playing or singing) a music extract from any other style (for instance Baroque variation or a Faure's song) and analyzing the chords by lead sheet symbols:

B/ Aural recognition:

- Listening the store of jazz chords from any "Tutorial" program (Ear-training software , Internet or CD etc.) and singing or playing them on piano or any instrument:

- Listening a jazz tune's chord progression from any "Tutorial" program (Ear-training software , Internet or CD etc.) and singing or playing them on piano or any instrument:
- Listening a jazz tune by a recording (any arrangement) and "playing along " on any instrument or singing and learning the chords by aurally:
- Listening a jazz tune by a recording (any arrangement) and "playing along " on any instrument or singing and checking the chords on sheet music:

2. Which way or ways do you prefer learning scales?

A/ Analysis from score:

- Reading and analyzing the scales from theory books , playing them on the piano and finding the chords that match them:
- Reading (playing or singing) a music extract from a Baroque variation and analyzing the chords and scales

B/ Aural recognition:

- Listening the store of scales from any "Tutorial" program (Ear-training software , Internet or CD etc.) and singing or playing them on piano or any instrument:
- Listening a jazz tune by a recording (any arrangement) and "playing along " on any instrument or singing and identifying the scales by aurally (for instance the improvisation):
- Listening a jazz tune by a recording (any arrangement) and "playing along " on any instrument or singing and checking the possible scales on sheet music:

3. Which did you like learning the jazz walking bass:

- Listening and learning the walking bass features from any "Tutorial" program (Ear-training software , Internet or CD etc.) and singing or playing them on piano or any instrument:
- Experiencing the "early" walking bass features from the Baroque era through reading (singing or playing) Baroque bass variations and improvising the "modern jazz walking bass" :

4. Do you feel improvisation or writing variations helpful for the learning of jazz and Baroque- Classical Harmony?.....

Why?.....

5. Which way or ways did you feel most comfortable improvising?

A/ In Baroque style (making variations on given theme, bass or chord progression):

- Playing the piano alone:
- Playing the piano and singing alone:
- Playing the piano in pairs:
- Playing or singing in group:
- Alone at home:

B/ In Jazz style (on the given tune or chord progression):

- Playing the piano alone:
- Playing the piano and singing alone:
- Playing the piano in pairs:
- Playing or singing in group:
- Alone at home:

Questionnaire 3

- Which way or ways did you feel the most effective learning Jazz harmony?
- Aural approach (listening chords, chord progressions played on the piano or from recording etc.)?
- Reading and analysing jazz chords from lead sheet score (jazz tunes)?
- Other?
- Did you feel the connection with Baroque harmony helpful in learning Jazz harmony?
- Did you feel the improvisation helpful in learning Jazz harmony?
- What kind of tasks did you feel the most challenging during the course?

- Which way or ways did you ENJOY the most learning Jazz and Baroque harmony?
- What changes would you suggest in the approaches to learning Jazz harmony?

Learning diary about the lesson No. 2 and home-work

How did you cope with your homework?

What kind of tasks did you feel more challenging:

- at the lesson
- in the homework?

Why?.....

Learning diary about the lesson No. 3. and home-work

Which way or ways did you feel the most effective in learning Jazz harmony at the lesson? What kind of tasks did you feel more challenging?

Why?

Examples:

- Experiencing the chords through voicing (Cycle of Fifth sequence)
- Singing the tune from music sheet while reading chords from Lead Sheet Symbols
- Listening the tune or chords by recording or from piano
- Reading -singing /playing the bass and chords form music sheet

How did you cope with your homework?

What kind of tasks did you feel more challenging:

Why?.....

Keywords/expressions:

writing melody variation on given chords, writing bass variation on given bass and chords , melodic embellishment, scales, walking bass, non-chord tones, diatonic embellishment, chromatic embellishment, triads, seventh chords, inversions (root position, first-second-third inversion), additional notes/colour notes/extended chords, voicing, open spacing, close spacing, 3-note voicing, 4-note-voicing, piano left-hand voicing, voice leading etc.

APPENDIX B

Study One:

Harmony Pre-Test

1/ Identify the chords with Roman numerals in the given key:

Grablied
Song at the sepulchre H. Wolf

2/ Identify the Non-Harmony Notes / Non-Chord Tones in the following example: (e.g. auxiliary, passing, suspended, neighbour notes)

Note! There might be slight differences between the explanation of these chords, therefore consider this chord analysis.

Ballad op.65, No.5. E. Grieg

c:I IV V_b I IV III V_b I

3/ Work out the following chord progression in close position led by the given melody and Roman numerals:

Pay attention to the basic rules of voice leading.

B: I⁽³⁾ IV⁽³⁾ V V⁽⁴⁾ I⁽³⁾ II⁽³⁾ II⁽³⁾ V

modulation to F:

4/ Work out the following chord progression in close position /close spacing (also known as keyboard spacing) shown in Figured Bass: Pay attention to the basic rules of voice leading.

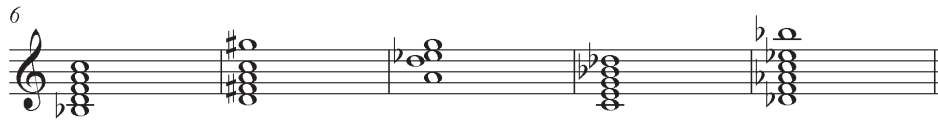
b minor: I

5/ Identify the chords with Lead Sheet Symbols:

Après un Rêve

Gabriel Fauré
1845-1924

6/ Identify the following chords by Lead Sheet Symbols:



7/ Write the following chords from Lead Sheet Symbols:

You can choose between tasks A and B and also staff(s) and clefs!

A: *simpler*

Gm7	C7	F6	B ^b Maj7	Em7/ ^b 5	A7aug	DmMaj7
-----	----	----	---------------------	---------------------	-------	--------

An empty musical staff with a grand staff (treble and bass clefs) for writing the chords listed above.

B: *advanced*

Gm7/9	C7/9/13	F6/9	B ^b Maj7/9	Esus ^o	A7/#5/#9	DmMaj7/9
-------	---------	------	-----------------------	-------------------	----------	----------

An empty musical staff with a grand staff (treble and bass clefs) for writing the chords listed above.

8/ Listen to the following chord progressions and determine their styles. What are the common elements as well as the different stylistic features in them?

1.....2.....

3.....4.....

Common:.....

Different:.....

Key for the Harmony Pre-Test

1/ Identify the chords with Roman numerals in the given key:

Grablied
Song at the sepulchre H. Wolf

F: I I⁶ I⁶ V² I⁶ V₃⁴ I

2/ Identify the Non-Harmony Notes / Non-Chord Tones in the following example: (e.g. auxiliary, passing, suspended, neighbour notes)

Note! There might be slight differences between the explanation of these chords, therefore consider this chord analysis.

Ballad op.65, No.5.

c:I IV V^b I IV III V^b I

3/ Work out the following chord progression in close position led by the given melody and Roman numerals:

Pay attention to the basic rules of voice leading.

B: I⁽³⁾ IV⁽³⁾₆ V V⁽⁴⁾₂ I⁽³⁾₆ II⁽³⁾₅ II⁽³⁾₅ V
 modulation to F:I II⁶ I⁶₄ V⁷ I

4/ Work out the following chord progression in close position /close spacing (also known as keyboard spacing) shown in Figured Bass: Pay attention to the basic rules of voice leading.

bminor: I³ VII^{6#} I⁶ II⁶ V⁽³⁾₈₇ VI IV⁶ I⁶₄ IV V⁷₍₃₎ I

5/ Identify the chords with Lead Sheet Symbols:

Après un Rêve

Gabriel Fauré
1845-1924

Bm DMaj7 E7/9 E7 A7/9
 5 Dsus7/9 D7/b9 G+ C[#]m/b5 F[#]7 F[#]sus7/b9 F[#]7 Bm

EmMaj7 Dm7/b5 Gm6 Csus7 G7/b5
 E△ D♭ G-6

B^bMaj7/9 D7/#11 Am7/b5sus4 C7/b9 D^b7/9/13
 B^b△9 D7add11 Asus♭

7/ Write the following chords from Lead Sheet Symbols:

The various solutions were discussed at the lessons with students!

8/ Listen to the following chord progressions and determine their styles. What are the common elements as well as the different stylistic features in them?

1.....baroque.....2.....classical.....

3.....Romantic.....4.....jazz.....

Common and different elements were discussed with students at the lessons!

Harmony Post-Test

1/ You will hear four chord progressions played on the piano. Give analysis in Roman numerals, identify the keys (major and minor) and the chords using Lead Sheet Symbols (extensions, added / colour notes etc.)

A/

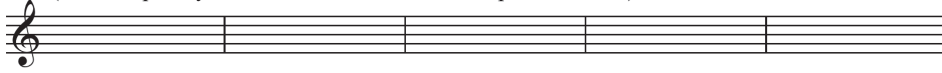
B/

C/

D/

2/

A/ Identify the following chords by Lead Sheet Symbols played on the piano:
(Not compulsory: write out the chords in close position on C)



6 B/ Write out the following chords in close position:

B^{7/b9/#11} **GMaj^{7/b5}** **E^{b13sus}** **Cm^{7/9/b5}** **A^{7/#5/b9}**

3/ Work out the II-V-I chord progressions in both keys following the given voicing on the treble staff:

G:II^m^{7/9} **V^{7/9}** **I^{Maj}^{7/9}** **d:II^ø** **V^{7/b9}** **I^m^{7/9}**

4/ Work out the II-V-I chord progressions in both keys in any voicing: (Follow one type of voicing in the II-V-I)

G^m^{7/9} **C^{7/9/13}** **F^{6/9}** **F^{#ø}** **B^{7/b9}** **Em^{Maj}⁷**

5/ Identify the chords with Roman numerals in the following baroque Fogliatheme. Analyze the variation No. 10 according to the baroque embellishments e.g. non-harmony notes, scales etc.

12 Variations for Spanish Foglia

Theme

C. Ph. E. Bach

Musical notation for the Theme, consisting of two staves (treble and bass clef) in 3/4 time. The melody is primarily composed of chords in the right hand and a simple bass line in the left hand.

Musical notation for Variation 7, consisting of two staves (treble and bass clef) in 3/4 time. The melody is primarily composed of chords in the right hand and a simple bass line in the left hand.

Musical notation for Variation 12, consisting of two staves (treble and bass clef) in 3/4 time. The melody is primarily composed of chords in the right hand and a simple bass line in the left hand.

Var. 10

Musical notation for Variation 10, consisting of two staves (treble and bass clef) in 3/8 time. The melody is primarily composed of eighth notes and sixteenth notes in the right hand and a simple bass line in the left hand.

Musical notation for Variation 7 (continued), consisting of two staves (treble and bass clef) in 3/8 time. The melody is primarily composed of eighth notes and sixteenth notes in the right hand and a simple bass line in the left hand.

Musical notation for Variation 12 (continued), consisting of two staves (treble and bass clef) in 3/8 time. The melody is primarily composed of eighth notes and sixteenth notes in the right hand and a simple bass line in the left hand.

Key for Harmony Post-Test

1/ You will hear four chord progressions played on the piano. Give analysis in Roman numerals, identify the keys (major and minor) and the chords using Lead Sheet Symbols (extensions, added / colour notes etc.)

A/ IIm7/9 -V7/9 - I6/9 in Major;
Dm7/9 - G7/9 - C6/9

B/ IIØ -V7/b9 - ImMaj7 in minor;
DØ- G7/b9 - CmMaj7

C/ IIm7/9 -V7/9/13 - IMaj9 in Major;
Dm7/9 - G7/9/13 - CMaj9

For tasks A, B and C the II-V-I as solution in Roman numerals is also accepted if the Lead Sheet Symbols show the quality of chords and extensions.

D/ Cycle of Fifths / IV7-VII7-III7-VI7-II-V7(#3)-
in minor;
IVm7-VII7-IIIIMaj7-VIMaj7-IIØ-V7-Im7 or
Dm7-G7-CMaj7-FMaj7-BØ-E7-Am7

2/

A/ Identify the following chords by Lead Sheet Symbols played on the piano:
(Not compulsory: write out the chords in close position on C)

C^{6/9} C¹³ Cm⁹ CMaj^{7add11} C^{7/ #5}

6 B/ Write out the following chords in close position:

B^{7/b9/#11} GMaj^{7/b5} E^{b13sus} Cm^{7/9/b5} A^{7/#5/b9}

3/ Work out the II-V-I chord progressions in both keys following the given voicing on the treble staff:

G:IIIm^{7/9} V^{7/9} IMaj^{7/9} d:II^ø V^{7/b9} Im^{7/9}

4/ Work out the II-V-I chord progressions in both keys in any voicing: (Follow one type of voicing in the II-V-I)

One of the possible solutions:

Gm^{7/9} C^{7/9/13} F^{6/9} F#^ø B^{7/b9} EmMaj⁷

5/ Identify the chords with Roman numerals in the following baroque Foglia-theme. Analyze the variation No. 10 according to the baroque embellishments e.g. non-harmony notes, scales etc.

Key for 12 Variations for Spanish Foglia

Theme

C. Ph. E. Bach

The musical score is in 3/4 time and consists of three systems of music. Each system has a treble and bass staff. Roman numerals and chord symbols are provided below the notes.

System 1 (Measures 1-6):

- Measure 1: d: I, Dm
- Measure 2: V#, A
- Measure 3: I, Dm
- Measure 4: VII, (F: V), C
- Measure 5: (III), I, F
- Measure 6: VII, V, C

System 2 (Measures 7-11):

- Measure 7: d: I, Dm
- Measure 8: V#, A
- Measure 9: I, Dm
- Measure 10: V#, A
- Measure 11: I, Dm

System 3 (Measures 12-16):

- Measure 12: VII, (F:V), C
- Measure 13: (III), I, F
- Measure 14: VII, V, C
- Measure 15: V⁶, A/C#
- Measure 16: I, Dm
- Measure 17: V⁴, Asus
- Measure 18: V³, A
- Measure 19: I, Dm

p= passing note
 sus=suspended note
 a = auxiliary notes (upper or lower / chromatic or diatonic changing, neighbor etc.)

Var. 10

The musical score for Var. 10 consists of four systems of piano accompaniment in 3/8 time, with a key signature of one flat (B-flat). The notation includes various ornaments and scale runs.

- System 1 (Measures 1-5):**
 - Measure 1: Treble clef has a passing note (p) on G4. Bass clef has a chord symbol $d:I$.
 - Measure 2: Treble clef has a suspended note (sus) on G4. Bass clef has a chord symbol $V\#$.
 - Measure 3: Treble clef has passing notes (p) on G4 and A4. Bass clef has a chord symbol I .
 - Measure 4: Treble clef has auxiliary notes (a) on G4 and A4, and passing notes (p) on G4 and A4. Bass clef has a chord symbol VII .
 - Measure 5: Treble clef has a passing note (p) on G4. Bass clef has a chord symbol III .
- System 2 (Measures 6-10):**
 - Measure 6: Treble clef has auxiliary notes (a) on G4 and A4, and passing notes (p) on G4 and A4. Bass clef has a chord symbol VII and the annotation "melodic minor scale".
 - Measure 7: Treble clef has auxiliary notes (a) on G4 and A4, and passing notes (p) on G4 and A4. Bass clef has a chord symbol I and the annotation "natural minor scale".
 - Measure 8: Treble clef has passing notes (p) on G4 and A4. Bass clef has a chord symbol $V\#$.
 - Measure 9: Treble clef has a passing note (p) on G4. Bass clef has a chord symbol I .
 - Measure 10: Treble clef has auxiliary notes (a) on G4 and A4, and passing notes (p) on G4 and A4. Bass clef has a chord symbol $V\#$.
- System 3 (Measures 11-13):**
 - Measure 11: Treble clef has a passing note (p) on G4. Bass clef has a chord symbol I .
 - Measure 12: Treble clef has passing notes (p) on G4 and A4. Bass clef has a chord symbol VII .
 - Measure 13: Treble clef has a passing note (p) on G4. Bass clef has a chord symbol III .
- System 4 (Measures 14-16):**
 - Measure 14: Treble clef has a suspended note (sus) on G4. Bass clef has a chord symbol VII and the annotation "melodic minor scale".
 - Measure 15: Treble clef has passing notes (p) on G4 and A4. Bass clef has a chord symbol $(I IV dominant \begin{smallmatrix} 6 & 5 \\ 4 & 3 \end{smallmatrix})$.
 - Measure 16: Treble clef has a passing note (p) on G4. Bass clef has a chord symbol I .

APPENDIX C

Study One:
Lesson plans

Lesson 1 (four sessions)

Pre-Harmony test

Lesson:

PRACTICAL APPROACH:

♪ **1 Free vocal improvisation** on given notes or chord:
e.g. perfect fifth, Harmonic series (Overtone scales)
(+ piano, if needed)

♪ **2 On given melody** e.g. pentaton
Imitation of others' melody.

♪ **3 On given bass** (groove) e.g.
l, s, f, m - baroque
l, m l d' - jazz

Discussion with students (also to warm up them for using English terms):
key, scale, pulse, time signature, rhythm patterns, ostinato, style of music, chords, functions in tonality, changes in any terms, structure, variation...etc.
How to know what to improvise? (Style, theme, random idea, group, solo, instrument, vocal etc.)

How to recognise the style?

1/ theme, melody, bass

2/ chords:

- Treatment of chords: chord progression in a certain style
- Tension and resolution of the chords in a certain style

3/ rhythm, tempo, time signature, pulse

4/ Instrument

5/ Band, alone arrangement (instruments)

6/ Music sheet:

Different styles - to know the chord's marking is needed:

- Figured bass
- Roman numerals
- Lead sheet symbols

Parallels between the earlier styles (baroque, classical, Romantic) and jazz:

A/Variation:

Baroque: e. g. chaconne, passacaglia, ground

Variation is built on a given theme by:

- Melody
- Chord progression
- Rhythm pattern
- All in one

Tools in melody variation:

- Melodic embellishment of the chord with non chord notes
- Chord changes, chords' inversions, voice leading changes etc..
- Rhythmical /metrical changes

B/Improvisation:

Which kind of improvisation?

- Free or improvisation or „lead“ or „grounded“ by theme
- Individually or collectively
- Stylistic

Some tools in „lead“ improvisation:

- folk music: text, store of notes, scales, keys, rhythm etc...
- church organ music : liturgy, musical frame etc...
- jazz: chord progression, theme, form etc...

Tools in „free“ improvisation:

Anything could happen

Free improvisation can be totally random or „here and now“ activity e.g.

- individually
- collectively – that means an idea of one individual can be improved by the mode of question – answer or simply freely

Overview of the most fundamental approaches to learning harmony and the music terms:

1. Basic approaches (methods) teaching baroque and classical harmony:
2. Basic approaches (methods) teaching jazz harmony:
3. General approaches (methods) learning basic harmony:

Drills: intervals, chords (triads, seventh chords – how to use these?)

What does harmony mean?

What does harmony mean in different eras?

What are the different elements of chords:

- Consonant and dissonant sounds
- Structure:

(chord tones and non-chord tones)

Extension or colour notes:

- Function
- Inversions of chords:
- Voice leading
- Voice doubling
- Cadences
- Turnarounds

We did not have enough time to discuss all of these issues, instead:

PRACTICAL APPROACH/ THEORETICAL APPROACH:

♪ Vocal- piano variation and improvisation on a given chord progression:

- Change notes within the scale/key
- Use notes out of the scale
- Change chord(s) even one note
- Change tempo, character, meter, pulse etc.

STYLISTIC APPROACH through Reading, Analysing:

♪ Baroque variations by Pachelbel, Handel: G (g minor): Handout!

Simple chaconne bass l, s, f, m, with Figured Bass

We have filled in the upper part of the harmony progression I V6 IV6 V in g minor in four voices, according to the classical voice leading and voice doubling possibilities. It was hard, because some students have never used the figured bass system!

AURAL APPROACH/ STYLISTIC APPROACH through Listening:

♪ Singing the bass l, s, f, m while I am playing the excerpts of Pachelbel, Handel: G (g minor) and singing back my bass variations

Homework 1:

- To play through the chord progression given in figured bass
- To play through the handout (Pachelbel and Handel) chaconnes and determine the Non-harmony notes!

Questionnaire 1: Approaches to learning harmony No. 1

Lesson 2 (four sessions)

Collection of Questionnaire No. 1

STYLISTIC APPROACH through Reading, Analysing:

1/ Baroque variations review by Pachelbel, Handel: G (g minor):

- ♪ Singing the bass (l, s, f, m) then all the voices,
(I will play and / or students' the excerpts)
- Determination of the chords and Non-harmony notes
- Singing the middle line for understanding the different Non-harmony notes connected to figures

Explanation of the figured bass system connected to the Roman numerals, Lead sheet symbols!

Determination of other terms: inversion of chords voice leading, key - tonality, function, different variation forms in Baroque: Chaconne, Passacaglia, Foglia etc.

PRACTICAL / STYLISTIC APPROACH through Listening:

2/ Improvisation (Vocal) while I am playing piano

♪ Variations on the chaconne bass: l, s, f, m,
Bass variations in baroque style and "free style" (based on the bass of chaconne of Pachelbel and Handel):

- I give ideas by playing the piano
- I play the chords with the simple bass line and
- Vocal improvisation making variations one-by-one:

A/ Baroque

B/ "free style"

It went pretty well!! Some of them were especially good in free style.

THEORETICAL APPROACH through Listening and Reading, Analysing:

The chord variants and possible voicing of I-V6 (handout):

- ♪ Listening and singing back the first couple of simplest chords by my playing the piano and recognizing them
♪ Identifying these for the handout and singing up the chords from bass and together in 3-4 voices from score.

It sounded quite well in tune but more problems were with the middle voices.

- Determination of the possible scales fitting the chords or progressions: modal, minors, pentatonic

STYLISTIC APPROACH through Listening and Reading, Analysing:

♪ Handel Chaconne in g minor (harp arrangement):

- Listening, singing and recognizing the similarity of chords and chord progressions of Pachelbel's and Handel's explored material by my playing the piano
- Singing the bass lines of the variation form score, figuring out the roots of the chords, determining the Chords with Roman numerals and Lead Sheet symbols

NEW Term: CYCLE OF FIFTH

Jazz material:

STYLISTIC APPROACH through Listening and Reading, Analysing

♪ ***Autumn Leaves* (jazz standard)**

- listening the song from recording and singing from sheet
- figuring out and singing the bass notes (roots of the chords) by listening recording and from my chord accompaniment, then checking the sheet music

THEORETICAL APPROACH through Reading, Analysing:

Chord variants of *Autumn Leaves* (handout):

(at least the simplest voiced up Cycle of Fifth examples, depending on how much time we have left)

Homework:

- Handel: Chaconne in g minor: Theme, variation No. 1, 3, 4, 6, 7
To play and sing the variations and to collect the musical stylistic elements for example embellishments.
- Handout I-V6:
Choosing 2 chord progressions from variants and identifying the scales that fit to the chords and trying to improvise a melody on them on the piano (and vocally)

Learning diary 1 (LD 2) about the progress of lesson and homework.

Lesson 3

Collecting the Learning diary 1 (LD 2) (home-work)
(Questionnaires too)

Homework checking:

PRACTICAL / STYLISTIC APPROACH through Reading, Analysing:

1. Handel: Chaconne in G (harp) theme and Variation 1, 3, 4 and the triplets variation

♪ The students play and explain the features of the variations especially in the bass, while others singing e.g. the real roots of the chords

AURAL APPROACH / STYLISTIC APPROACH through Listening:

♪ **Experiencing the connections between bass variations and jazz walking bass through the melodic embellishments, e.g. passing notes, arpeggios and figurations by:**

- listening my playing:
the sing the real roots of chord progressions on the first beat
- recording (tutorial from internet)
- recordings of jazz standards for example *Autumn Leaves*

Homework checking:

PRACTICAL / THEORETICAL APPROACH / ANALYSIS**2. Identification of the scales fit to the I V6 chords**

♪ I V6 variants on handout: students' choice

Overview of scales:

Major, Modal, Harmonic and melodic minors, (just to mention the altered scales)

Acoustic scale, pentatonic, whole-tone, chromatic, 1-2 and 2-1 symmetric scales.

Overtones: presenting the phenomena on the piano if needed

Consequences: Some students have difficulties to connect the scales to harmonies, because they do not know the modal scales. I need to teach and assess only the modal scales and some of the melodic/ harmonic minors connected to jazz II-V- I improvisation and baroque music!

PRACTICAL / THEORETICAL APPROACH through Reading, Analysing:**Cycle of fifth progression:**

♪ Making connection to the 1-8 bars of *Autumn Leaves*:

- Singing/ playing the *Autumn Leaves* chord variants,
- Identification of the chords again - Lead Sheet (stock of jazz chords)
- Exploration of the II-V-I in major and minor
- Voicing possibilities of the II-V-I
- Singing the standard *Autumn Leaves* while playing the chords (plus walking bass)

THEORETICAL APPROACH through Listening:

Exploration of the voicing of the *Autumn Leaves* chord progression:

♪ **Handout of Chord variants of *Autumn Leaves***

Listening and singing back the chords from bass form my playing

Voicing up the voices of the chords together in 2-4 and 5 voices

THEORETICAL APPROACH through Reading, Analysing:

Singing the chords and voices of chord progressions (melodies) from handout

Singing the chords together in 2-4 and 5 voices

PRACTICAL APPROACH:

Students play / sing chord progressions: one voice to sing and the rest to play. Students can also share the played voices together.

We practiced the chords with 7/9, the "classical" voicing and the third-seventh voicing until F!

AURAL APPROACH / STYLISTIC APPROACH through Listening:

Fly Me to the Moon:

♪ Listening: Diana Krall's performance and identifying the similarities between *Autumn Leaves*

- Singing the standard tune while I am playing the chords

- Making connection to the 1-8 bars of *Autumn Leaves*
- Listening the walking bass from the recording
- Singing the bass notes from recording
- I play-along the recording to show a possible way of practice either by listening or with music sheet

The recording is in different key from the Lead Sheet!

PRACTICAL / STYLISTIC APPROACH through Reading, Analysing:

Walking bass:

- Experiencing the “early” walking bass features from baroque bass variations:
 🎵 Singing by reading score of Handel: Sarabande in D and connecting it to the jazz walking bass
- Exploration of the non-harmonic and chromatic features of the walking bass
- writing by dictation, improvising together e.g. playing with me on the piano: Students play the circle of fifth (or part of it) chord progression and I play first the walking bass

STYLISTIC / AURAL APPROACH:

Additional examples for listening from my playing and recording:

🎵 Purcell chaconne/passacaglia walking and chromatic walking bass lines

Homework:

Writing two variations:

On given bass and chord progression: I V6 IV6 V in baroque style:

- Melody
- Bass

Voicing up the chord progression: *Fly me to the moon* as they wish to play on the piano (by the sample of the *Autumn Leaves*)

Cancelled task for next time:

Write a walking bass either on the Fly Me to the moon 1-8 bars, or a II-V-I (we need to explore and practice the jazz walking bass more!)

Learning diary No. 2 (LD 3) about the progress of lesson and homework.

Lesson 4 (four sessions)

First partly video recorded lesson

Collecting the Learning diary 2 (LD 3) and written home-works

Video: home-works, improvisation and discussions about the methods and approaches

Pre-test check: Handout of Key of the Pre-Test

Tasks connected to the current topic or teaching material:

- 1/ Roman numeral analysis (Wolf)
- 2/ Non-harmony notes analysis (Grieg)
- 3/ Classical chord progression writing in four voices from Roman numerals and melody
- 4/ Classical chord progression writing in four voices from Figured Bass

Jazz harmony tasks check (analysis, writing and aural recognition): Task No. 5 - 8 at the next Lesson 5!

Homework checking:

Video!

PRACTICAL / STYLISTIC APPROACH

♪ Playing the piano:

1. Written two variations on given bass and I V6 IV6 V in Baroque:

- Melody
- Bass

2. V6 variants: students' choice of scales (last homework)

3. Voicing and playing the *Fly Me to the Moon* chord progression

Deeper exploration of "Stylistic" and "Theoretical approaches" through different tasks. Discussion with students of questions from Q1:

"How did you learn harmony in general during your previous music studies?"

THEORETICAL APPROACH through Reading, Analyzing:

♪ Stock of Jazz chords (including basic chords) - Handout

Reading and singing the Stock of Jazz chords from different Real Books marked by lead sheet symbols based on C.

Singing it up with arpeggio and voicing up together sharing the voices between students

This was much more difficult most of them than by listening the chords first, because students had to imagine what to sing up. To play the chords from sheet is easier.

THEORETICAL APPROACH through Listening:

Listening the Stock of chords from Ear-training software (internet) and my playing on the piano, identifying and checking them on the handout

PRACTICAL / THEORETICAL approach through Reading Analyzing:

Playing the Stock of Jazz chords from handout: students play the chords and sing them up. (recommended also in Home-work!)

Also recommended to drill the chords the same way by listening a tutorial or others' playing.

THEORETICAL APPROACH through Reading, Analyzing:

♪ **Stock of basic chords – Handout**

Reading and singing the basic chords appearing in baroque / classical style: triads, seventh chords and inversions by figures and Roman numeral markings

PRACTICAL / THEORETICAL APPROACH through Listening:

♪ Singing, identifying and writing down the different chords, chord progressions used in baroque / classical style from piano, including the different voicing and voice-leading features.

THEORETICAL APPROACH through Reading, Analyzing:

♪ **Reading the chords and analyzing the chord progression of *Take the A Train*: II-V-I**

PRACTICAL / THEORETICAL APPROACH:

♪ **Improvisation on II-V-I:** *applying theoretical knowledge in a particular style through musical activity*

AURAL / STYLISTIC APPROACH:

♪ ***Take the A Train* (Ella Fitzgerald, Oscar Peterson in YouTube):**

Listening and singing back the song and bass and learning it by ear

STYLISTIC APPROACH through Reading, Analyzing and Listening

♪ **Take the A Train:** Reading the sheet music:

Singing the song with “la” or “doo” (or with words):

- Even beats (not swing)
- upbeats and syncopation as it is written
- In Swing
- Free upbeats and syncopation

Listening the song (tune) and identifying that E. F. sung the song differently:

- Different melody
- Different rhythm: syncopation, upbeats, language features, swing triplet feelings
- Shifts between the singer and band's riffs

PRACTICAL / STYLISTIC APPROACH combining Listening and Reading:

Play-along with the recording: Video!

♪ *Take the A Train* (Ella Fitzgerald, Oscar Peterson)

First playing only the roots of the chords, then melody, bass and melody these together, alone and with peers, chords, chord progressions etc..depending on the students' skills

Two students challenged themselves:

- Ed played bass roots
- Anna bass roots and Ed chords

They did the first time this task!

Consequences: They could manage it quite well, although the tempo was too fast for them (another bothering circumstance was that unfortunately the recording and the piano tuning had almost a semitone difference)

STYLISTIC APPROACH through Listening:

♪ Walking bass tutorials from YouTube

PRACTICAL / STYLISTIC APPROACH through Reading:

♪ Walking bass: singing and playing and VARIATION, IMPROVISATION

PRACTICAL / STYLISTIC APPROACH:

♪ *Autumn Leaves* and *Fly Me to the Moon* chord progression of Cycle of Fifth - II-V-I in major and minor

Playing along then without the recording the songs, chord progressions together in pairs, trios (sharing voices between students)

IMPROVISATION together and alone: Video!

With and without the recording

Discussions by Q1:

- Which way or approach do they feel the most effective in learning harmony in that particular style?

Which way do they enjoy it the most?

Homework:

1/ Learning the Stock of Jazz Chords until the 7th line by playing the piano/singing

2/ Learning the song *Take the A train*

- Playing the chords (just with one hand in close position)
- playing and singing the roots of the bass
- if it possible playing all of these with two hands
- sing and play: singing as many different voices is possible while playing other voices

3/ Writing Walking bass (See also cancelled Homework in Lesson 3)

4/ Not compulsory but recommended:

- Rewriting baroque variations
- Re-voicing / correcting voicing of the *Fly Me to the Moon*

Plan for the next lessons:

Dealing with even more Jazz material, voicing and listening II-V-I chord progression, standard songs, voicing and basic jazz chords, improvisation, basic

scale theory (and probably blues and Baroque cadenzas and fantasias – “free improvisation”) Video!

Lesson 5 (four sessions)

Second partly video recorded lesson

Plan of the lesson:

More one-by-one aural assessments of home-works and improvisation!

Pre-test check: Handout of Key of the Pre-Test

Task 5-7b

- Analysis of Faure excerpt with Jazz Lead Symbols
- Identifying the jazz chords in close position with Lead Sheet Symbols
- Chord writing of basic Jazz chords from Lead Sheet Symbols
- Chord writing of Jazz chords with colour notes / extensions from Lead Sheet Symbols

Homework checking:

AURAL / THEORETICAL APPROACH:

♪ Stock of Jazz chords (including basic chords) – Handout

Students sing together then recognize one by one the learnt chords from playing the piano, dictation and singing together sharing voices

The continuation of the material from Lesson 4:

THEORETICAL APPROACH through Listening and Reading, Analyzing:

♪ Stock of Jazz chords (including basic chords) – Handout

Recognizing the similarities between the already learnt chords and the new ones by ear, then checking the handout

Discussions: Video recorded

- How would they start to learn a new chord or how would they teach it?

PRACTICAL APPROACH:

♪ Improvisation together in pairs with me on the piano: students play melody on my accompaniment discovering the fitting scales, melody embellishments etc.

I lead students with ideas, grooves and themes to students but let them also to change sound to modal scales, acoustic scale, blues, etc.

- C chord
- Pentatonic groove
- Blues

- Students will choose two chords

Students may improvise with pairs too!

- Aural analysis: listening and identifying 4 chords progressions in different styles

PRACTICAL / STYLISTIC APPROACH through Reading, Analyzing :

♪ *Autumn Leaves and Fly Me to the Moon, Cycle of Fifth - II-V-I in major and minor. Handout of chord progression of Autumn Leaves*

Collecting chords, and progressions through reading, singing and playing them together by sharing voices

Writing: Voicing II-V-I with 7/9-s according to the Handout

- Voicing *Fly Me to the Moon* by 3rd and 5th
- Playing together the *Fly me to the Moon* chord progression in many versions on the piano, with singing the tune with the recording

Improvisation:

♪ *Autumn Leaves and Fly Me to the Moon, Cycle of Fifth - II-V-I*

Playing along the recording and improvisation without the recording together

Pre-test check Task 8: Cancelled for next lesson because of two students' absence

AURAL/ PRACTICAL APPROACH:

♪ Listening and writing (dictation) chords, chord progressions (II-V-I and baroque / classical styles) from playing the piano

Continuation of the Lesson 4 - Homework checking:

- Scales for I-V6 chords
- Writing variations on I V6 IV6 V in baroque style

AURAL / STYLISTIC APPROACH:

♪ Baroque bass variations by Handout Handel- Sarabande in D, with reference also to Purcell's chaconnes and passacaglias

Listening the non-harmonic and chromatic features of the baroque bass variations referring to the jazz walking bass, singing back and writing bass variations jazz walking bass with chromatic notes as dictations

Homework:

- Learning all jazz chords from lead sheet
- Work out and learn all the voicing possibilities of *Autumn Leaves* and *Fly Me to the Moon*
- II-V-I in major and minor
- Learning to play the tune and chords of *Take the A train*

- Learning to play the simplest voicing 3rd-7th of *Take the A train* by Handout
- Working out and learn all the voicing possibilities of *Take the A train* (*Autumn Leaves* and *Fly Me to the Moon* still!)
- Writing a walking bass either on the chord progression of Cycle of fifth or *Take the A train*

Questionnaire 2 – approaches to learning jazz harmony

Lesson 6 (four sessions)

Homework check combining with new material:

PRACTICAL / AURAL / STYLISTIC/ THEORETICAL APPROACH through Listening:

♫ **Stock of Jazz Chords – Handout and Basic chords, chord progressions used in baroque – classical style (Handout)**

Autumn Leaves and *Fly Me to the Moon* chord progressions and voicing possibilities of Cycle of Fifth –and II-V-I in major and minor

- Singing back together from piano and identifying the chords, chord progressions one by one

PRACTICAL / THEORETICAL APPROACH through Reading:

Checking the voicing of *Take the A train* (home-work)

- singing
- playing

PRACTICAL / THEORETICAL APPROACH through Listening:

♫ **Listening other chord voicing possibilities of *Take the A train* (Handout)**

- writing the voicing
- playing on the piano

STYLISTIC / AURAL APPROACH:

♫ **Practicing baroque bass variations from the Händel: Sarabande in D connected to jazz walking bass features:**

Listening, writing bass variations from recording and from my playing

THEORETICAL / AURAL APPROACH:

♫ **Listening Walking bass tutorials and John Patitucci: Bass Workshop –You Tube**

PRACTICAL / STYLISTIC APPROACH:

Homework checking: Playing / singing the written walking bass variations

THEORETICAL APPROACH through Reading, Analyzing and Listening:

♫ **Basic Blues chord progression**

Handout of Aebersold's material and listening recordings

F7 Bflat7 F7 F7

Bflat7 Bflat7 F7 Am7 D7

Gm7 C7 F7 (C7)

STYLISTIC / AURAL APPROACH:

Checking Pre-Test Task No. 8:

Recognizing Cycle of Fifth chord progression in different styles by listening

PRACTICAL / STYLISTIC APPROACH:

Homework checking:

Playing the written variations on I V6 IV6 V

PRACTICAL / STYLISTIC APPROACH through Listening

♪ Listening Pachelbel Canon in G from recording

- Recognizing the chords by singing and playing
- VARIATION and IMPROVISATION together in pairs

Homework: (preparing Post-Harmony Test)

- Write a walking bass: on II-V-I in major and minor
- Work out and learn to play all the voicing possibilities of *Take the A train* (*Autumn Leaves and Fly Me to the Moon still!*)
- Learn all the store of jazz chords from lead sheet
- Learn to play II-V-I patterns in both Major and minor
- Learn the basic Blues chord progression:

Questionnaire 2 - approaches to learning jazz harmony

Lesson 7 (four sessions)

Collecting Q 2

Checking the written Home-works:

- voicing possibilities of *Take the A train*
- baroque and jazz walking bass variations

Improvisation alone and together:

♪ *Take the A train*, II-V-I and Cycle of Fifth

♪ Baroque chord progressions and style

♪ Scales on I -V6 chord variants

Post-Harmony test

Conclusion questionnaire Q3

Study One:

Handouts of musical examples (scores, supplementary music theory material, chord summaries)

Theme and the First variation
from Pachelbel - Chaconne in f minor for Organ (22 Variations)
 (Transposed into g minor)

Manual

Pedal with chaconne bass

g: i v⁶ iv⁶ V[#] i v⁶

7

iv⁶ i₄⁶ V⁴ 3[#] i v⁶ iv⁶

12

i₄⁶ V[#] i v⁶ iv⁶ i₄⁶ V[#] i

Variation IX.
Chaconne in G (XXI Variations)

from bar 73

G. F. Handel

Adagio

Variation XI.
Chaconne in G (XXI Variations)

G.F. Handel

from bar 89

Adagio

Variation X.
Chaconne in G (XXI Variations)

G.F. Handel

from bar 81

Adagio

Variation XIV.
Chaconne in G (XXI Variations)

G.F. Handel

from bar 113

Adagio

Chord variants on I-V6

g: I V⁶
Gm Dm/F Gm7 F7 Gm7/9 FMaj7 Gm7/9 F7/9

9

Gsus7/9 Fsus7/9 Gsus7/9 F7/9 Gm7/9 F7/9/13 Gm6/9 F7/9/13

17

Gm6/9 F7/9 Gm6/9 Fm6/9 Gsus7 Fsus7 Gsus7/9 F/G Fsus7/9 E/F Gm7/9 Fm7/9

27

G7/9 F7/9 G7/9/13 F7/9/13 G7/13 F7/13 G7/b13 F7/13 G7/9 F7/9/b13

37

G[♯]Maj7/9 F7/9 G[♯]Maj7/9 F[♯]Maj7/9 G7/9 F7/9 G[♯]Maj7/9 F[♯]Maj7/9 G7/9/13 F6/9

47

Gm6/9 F6/9 G6/9 Fm6/9 Gm6/9 FMaj7/9 G7/9 F7/b10 G7/b10 F7/b10

Cycle of Fifth chord progression based on the jazz standard 'Autumn Leaves'

Gm:	IVm7	VII7	IIIMaj7	VIMaj7	II ^ø	V7	Im7
B ^b :	IIIm7	V7	IMaj7	(IVMaj7)			
Gm:	II ^ø		V7		Im7		

A

Cm7 F7 B^bMaj7 E^bMaj7 A^ø D7 Gm7

in inversions

B 5th is omitted

17

in inversions

25

C 33 Classical voice leading: 5th is omitted and root of the chord doubled in every second chord

D 41 7th with added 9th

49

Cm7 F7/9 B^bMaj7 E^bMaj7/9 A^ø D7/9 Gm7

Cm7/9 F7 B^bMaj7/9 E^bMaj7 A^øb9 D7 Gm7/9

Theme of Sarabande in d minor

G.F. Handel

bar 1-8

5

Variation II from Sarabande in d minor

G.F. Handel

bar 33-40

Variation in the bass

Jazz walking bass line based on the jazz standard 'Fly Me to the Moon'

Dm7 Gm7 C7 FMaj7

5 B^bMaj7 Em7/^b5 A7 Dm7

Stock of chords

Chord sequence with root, first and second inversion triads in major

Chord sequence with root, first and second inversion triads in major:

Staff	Chord	Triad
I	F:I	VI ⁶
I	VI ⁶	IV ₄ ⁶
I	IV ₄ ⁶	II
I	II	VII ⁶
I	VII ⁶	V ₄ ⁶
I	V ₄ ⁶	III
II	I ⁶	VI ₄ ⁶
II	VI ₄ ⁶	IV
II	IV	II ⁶
II	II ⁶	VII ₄ ⁶
II	VII ₄ ⁶	V
II	V	III ⁶
III	I ₄ ⁶	VI
III	VI	IV ⁶
III	IV ⁶	II ₄ ⁶
III	II ₄ ⁶	VII
III	VII	V ⁶
III	V ⁶	III ₄ ⁶ (da capo)

Chord sequence with root, first and second inversion triads in harmonic minor

Chord sequence with root, first and second inversion triads in harmonic minor:

Staff	Chord	Triad
I	d:I	VI ⁶
I	VI ⁶	IV ₄ ⁶
I	IV ₄ ⁶	II
I	II	VII ^{6#}
I	VII ^{6#}	V ₄ ^{6#}
I	V ₄ ^{6#}	III ^{5#}
II	I ⁶	VI ₄ ⁶
II	VI ₄ ⁶	IV
II	IV	II ⁶
II	II ⁶	VII ₄ ^{6#}
II	VII ₄ ^{6#}	V(3) [#]
II	V(3) [#]	III ₍₃₎ ^{6#}
III	I ₄ ⁶	VI
III	VI	IV ⁶
III	IV ⁶	II ₄ ⁶
III	II ₄ ⁶	VII _#
III	VII _#	V _# ⁶
III	V _# ⁶	III _# ⁶ (da capo)

Chord sequence with root, first and second inversion triads in melodic minor

Chord sequence with root, first and second inversion triads in melodic minor:

Staff	Chord	Triad
I	d:I	VI ^{6#}
I	VI ^{6#}	IV ₄ ^{6#}
I	IV ₄ ^{6#}	II ^{5#}
I	II ^{5#}	VII ^{6#}
I	VII ^{6#}	V ₄ ^{6#}
I	V ₄ ^{6#}	III ^{5#}
II	I ⁶	VI ₄ ^{6#}
II	VI ₄ ^{6#}	IV(3) _#
II	IV(3) _#	II ₍₃₎ ^{6#}
II	II ₍₃₎ ^{6#}	VII ₄ ^{6#}
II	VII ₄ ^{6#}	V(3) [#]
II	V(3) [#]	III ₍₃₎ ^{6#}
III	I ₄ ⁶	VI
III	VI	IV ⁶
III	IV ⁶	II ₄ ⁶
III	II ₄ ⁶	VII _#
III	VII _#	V _# ⁶
III	V _# ⁶	III _# ⁶ (da capo)

Seventh chord sequence in major

Diagram illustrating the seventh chord sequence in major, showing four staves (I, II, III, IV) with chord diagrams and labels. The sequence consists of seven chords: D:II², IV⁴₃, VI⁶₅, I⁷, III², V⁴₃, VII⁶₅. The second staff (II) shows II⁷, IV², VI⁴₃, I⁶₅, III⁷, V², VII⁴₃. The third staff (III) shows II⁶₅, IV⁷, VI², I⁴₃, III⁶₅, V⁷, VII². The fourth staff (IV) shows II⁴₃, IV⁶₅, VI⁷, I², III⁴₃, V⁶₅, VII⁷ (da capo).

Seventh chord sequence in harmonic minor

Diagram illustrating the seventh chord sequence in harmonic minor, showing four staves (I, II, III, IV) with chord diagrams and labels. The sequence consists of seven chords: h:II², IV⁴₃, VI⁶₅, I^{7#}, III^{6#}₂, V^{6#}₃, VII^{6#}₅. The second staff (II) shows II⁷, IV², VI⁴₃, I⁶_{5#}, III⁷_{5#}, V^{4#}₂, VII^{4#}₃. The third staff (III) shows II⁶₅, IV⁷, VI², I⁴_{3#}, III⁶_{5#}, V⁷_{(3)#}, VII^{2#}. The fourth staff (IV) shows II⁴₃, IV⁶₅, VI⁷, I², III⁴₃, V⁶₅, VII⁷ (da capo).

Seventh chord sequence in melodic minor

Diagram illustrating the seventh chord sequence in melodic minor, showing four staves (I, II, III, IV) with chord diagrams and labels. The sequence consists of seven chords: h:II^{6#}₂, IV^{6#}₃, VI^{6#}₅, I^{7#}, III^{6#}₂, V^{6#}₃, VII^{6#}₅. The second staff (II) shows II⁷_{5#}, IV^{4#}₂, VI^{4#}₃, I⁶_{5#}, III⁷_{5#}, V^{4#}₂, VII^{4#}₃. The third staff (III) shows II⁶_{5#}, IV⁷_{(3)#}, VI^{2#}, I⁴_{3#}, III⁶₅, V⁷_{(3)#}, VII^{2#}. The fourth staff (IV) shows II⁴₃, IV⁶₅, VI⁷, I², III⁴₃, V⁶₅, VII^{7#} (da capo).

Lead Sheet Symbols

C Cmi Cmi/b5 C+ C6 Cmi6 C6/9 Cmi6/9
 C- C^o Cdim C#5 Caug

C7 Cmi7 Cmi7/5^b C+7 CMaj7
 C-7 C^o C7/5# C^Δ C^{aug}7

⁵ CmiMaj7 C^oMaj7 C+Maj7 C^o7 C7/5^b
 C-Maj7 CdimMaj7 CMaj7/5# Cdim7

C^{sus} C7^{sus} Cmi7^{sus/b5} C9^{sus} C13^{sus}
 C^o^{sus} C7^{sus}/9 C7^{sus}/9/13

C9 C7/9^b C7/#11 C9/#11 C7/b9/#11 C13 C13/b9 C13/#11
 C7/9 C7add#11 C7/9#11 C7/9/13 C7/b9/13 C7/9#11/13

⁹ Cmi9 Cmi7/11 Cmi11 CMaj9 CMaj7#9 CMaj13 C+9 C+7/b9
 Cmi7/9 Cmi7(add11) Cmi7/9/11 CMaj7/9 CMaj7#9 CMaj7/9/13 C7#5/9 C7#5/b9

¹⁷ C+7/#9 C9/b5 C7/b5/b9 C13/b5 C^o7/b9 C7/b10
 C7/#5/#9 C7/9/b5 C7^b5/9/13 Cdim7/b9 C7addb10

APPENDIX D

Study One: List of sub-codes and code frequency from the Hyper Research software,
Overview of students as cases

Code	Total	Min	Max	Mean	Std Dev	Bar Graph
analysis from score	52	52	52	52	-	████████████████████
at music institution	8	8	8	8	-	██████████
audition to a music institution	2	2	2	2	-	██████
aural recognition	40	40	40	40	-	████████████████████
benefit of analysis	2	2	2	2	-	██████
benefit of aural recognition	1	1	1	1	-	████
benefit of connecting Baroque and Jazz	8	8	8	8	-	██████████
benefit of improvisation	18	18	18	18	-	██████████████
benefit of peer-learning	1	1	1	1	-	████
benefit of playing the piano	3	3	3	3	-	██████
benefit of theory	5	5	5	5	-	██████
benefit of writing variations	7	7	7	7	-	██████
challenge in writing bass variation on given bass an	2	2	2	2	-	██████
challenge in writing walking bass	1	1	1	1	-	████
challenges in analysis	8	8	8	8	-	██████████
challenges in aural recognition	3	3	3	3	-	██████
challenges in classical harmony	3	3	3	3	-	██████
challenges in improvisation	6	6	6	6	-	██████
challenges in inner hearing	4	4	4	4	-	██████
challenges in Jazz harmony	1	1	1	1	-	████
challenges in Jazz pop markings	1	1	1	1	-	████
challenges in naming notes by singing	3	3	3	3	-	██████
challenges in playing the piano	10	10	10	10	-	██████████
challenges in playing the piano by listening	2	2	2	2	-	██████
challenges in reading tune by singing from sheet	8	8	8	8	-	██████████
challenges in scale theory	9	9	9	9	-	██████████
challenges in staying in style	2	2	2	2	-	██████
challenges in tasks of aural recognition	6	6	6	6	-	██████
challenges in voicing up chords	6	6	6	6	-	██████
challenges in writing variations	1	1	1	1	-	████
choir conductiong	3	3	3	3	-	██████
classical music studies at secondary level	1	1	1	1	-	████
classical music studies at tertiary level Ammatti	4	4	4	4	-	██████
connecting Baroque and Jazz	9	9	9	9	-	██████████
determining terms	4	4	4	4	-	██████
different approach to improvisation suggested	1	1	1	1	-	████
emphasis on Classical theory	2	2	2	2	-	██████
emphasis on Jazz theory	0	0	0	0	-	
enjoying analysing	2	2	2	2	-	██████
enjoying aural approach	2	2	2	2	-	██████
enjoying chord voicing	1	1	1	1	-	████
enjoying connecting Baroque and Jazz	2	2	2	2	-	██████
enjoying creative tasks	2	2	2	2	-	██████
enjoying improvisation	5	5	5	5	-	██████
enjoying improvisation in group	0	0	0	0	-	
enjoying improvisation in pairs	1	1	1	1	-	████
enjoying listening	5	5	5	5	-	██████
enjoying making variations	2	2	2	2	-	██████
enjoying music theory	4	4	4	4	-	██████
enjoying piano improvisation	1	1	1	1	-	████
enjoying playing the piano	6	6	6	6	-	██████

Overview of students as cases

The following section provides information on how students' individual backgrounds affected not only their suggestions for the approaches to be used in the course, but also their performance in it, and their conclusions about the course as a whole.

Helena

Helena got overall the highest test results of all students, if the results for the pre-test and post-test are added together.

Pre-test:

She left out two tasks, namely (i) using figured bass to part-write a classical chord progression in four voices; and (ii) writing jazz chords with colour notes/extensions from lead-sheet symbols.

Post-test:

She solved all tasks excellently.

The high results in the tests were probably due to her being a fourth year student of Music Education at the time of the course, with piano as her main instrument. In the pre-test her strong knowledge of classical music was also evident. Her background in music education consisted of 20 years in classical music (six of which were in piano studies, five in classical theory, four in solfège and three years spent singing in choirs). She had a good grasp of jazz harmony (e.g., stock of chords and lead-sheet symbols) in spite of her comparative lack of formal jazz studies. Her only experience had come mainly from a year of piano lessons at university, which included jazz harmony, and through teaching herself for two years.

In her previous studies she learnt classical harmony mainly through score analysis, as it was a compulsory subject at school. Aural recognition, through listening alone, only occasionally featured. She learnt jazz harmony, however, through a general interest in playing the piano. This contrast in learning contexts accounts for a clear distinction in the approaches she connects with each style. As she put it, "*classical was paperwork, jazz was hands-on work*".

Before the course she considered the most effective way to learn harmony was through listening and playing the piano. Another important factor mentioned earlier was that she felt learning harmony was easiest for her when playing the piano alone. All this experience suggested to her that practical approaches to learning harmony were more applicable. Playing an instrument and listening were therefore very important, but she also found it easier to analyse scores of music that were already familiar to her. In other words, theory must be connected to real practice.

During the course, she managed very well with the tasks that dealt with: (i) chords or chord progressions from the Baroque and Classical eras that connected with basic scales (the pentatonic, major, and minor scales, plus their modes); and (ii) analysis, such as playing and writing variations on a given baroque theme and chord progression.

However, she found it challenging to find scales to fit with the more complex chords in jazz, and their colourations or tensions. She also found it hard to identify and write down onto a score the jazz chords from an audio recording. These challenges were probably rooted in the fact that she saw herself as more of a "*visual learner*", and due to the comparative paucity in her background of either jazz theory or learning harmony through aural recognition. All the same, the progress she made in these areas during the course can be

seen from her successful results in the post-test. Whereas in the pre-test she left out the task of writing jazz chords with colour notes/extensions from lead-sheet symbols, by the time it came to the post-test, she was voicing the colourations and extended harmonies perfectly.

By the end of the course she found that the most beneficial way to learn harmony in general was to adopt a practical approach, and to listen to music from the piano and recordings. But when it came to jazz harmony in particular, she also found singing, playing (and reading) from a score, as well as recognizing chords from different voicings all useful techniques. The score helped her to see the structure of the tune and how chords connected to the melody. This suggested a healthy balance between theory and practice by the time the course finished, as she noted that these formerly challenging tasks were now the most enjoyable ways to learn jazz harmony.

She also remarked on the benefits of connecting jazz harmony with the classical, perhaps because she already had a strong classical theory background which would have made this easier. She felt improvisation was particularly helpful for learning jazz harmony because it provided the means for putting aural skills into meaningful practice - *“when improvising you hear what kind of chords go well together and what not.”*

Jasmin

Jasmin got the highest results in the pre-test along with Helena, but she had only good result in post-test.

Pre-test:

The only task she left out was using figured bass to part-write a classical chord progression in four voices.

Post-test:

She only had a few problems with (i) using lead-sheet symbols to identify cycle of fifth and jazz II-V-I chord progressions (with colourations/extensions) through listening; (ii) writing jazz II-V-I chord progressions in free voicing from Roman numerals with colourations/extensions; and a couple of terminology mistakes regarding the melodic minor in (iii) analysing a baroque foglia theme and variation in Roman numerals, with identification of the non-harmony notes.

The high results in the tests were probably, like Helena, due to her experience (second year student of Music Education, with piano as her main instrument). In the pre-test a strong background in classical music was apparent, even though on paper she had the least classical background of the whole group - only one year in classical theory and solfège at university. She had also sung for 3 years in different choirs, and taken private piano lessons for 7 years (outside an institution). Although she had no formal jazz studies, her pre-test results for jazz theory were very good. She had evidently taught herself much and learnt to improvise during the 7 years of piano lessons. Perhaps for this reason she suggested more aural approaches for this course, or *“learning by ear”*.

She came away from the course, with the opinion that reading from sheet music, mostly by singing and playing the piano, were both useful tasks. At the same time, she found these tasks some of the most challenging, particularly “*naming the notes by singing*”. The reason for this might have been because she saw herself as foremost a pianist. However, it came to light that most of her problems in score-reading, especially through singing, stemmed from a lack of confidence in her inner hearing ability - “*when you sing you really have to hear the notes*” - which was something she brought with her as part of her educational background. Indeed, most tasks related to aural recognition were seen by her as challenging, and this mistrust in her own hearing clearly manifested itself in both the harmony tests. In the pre-test she had no problem solving the task of writing jazz chords with colour notes/extensions from lead-sheet symbols, but in the post-test she had trouble with identifying cycle of fifth and jazz II-V-I chord progressions with colourations/extensions through listening and using lead sheet symbols and the tasks that involved voicing. By the end of the course, these results indeed confirmed that her preferred approach for learning harmony was aural. Because of her lack of formal jazz theory training, she also had some problems grasping the more complex chords during this short learning period, therefore she at least acknowledged that the analytical approach was useful. In addition, like Helena, she found the improvisation part of the practical approach a useful way of putting theory about learning harmony, particularly jazz, into practice.

Agatha

Overall, Agatha had very good results in both tests.

Pre-test:

She had some problems with (i) analysis of a late Romantic excerpt from lead-sheet chord symbols; (ii) both of the tasks that involved part-writing of a classical chord progression in four voices; as well as (iii) writing jazz chords with colour notes/extensions from lead-sheet symbols.

Post-test:

The only problems were (i) in identifying cycle of fifth and jazz II-V-I chord progressions with colourations/extensions; and (ii) writing jazz II-V-I chord progressions in free voicing.

Agatha was, like Helena, also a fourth year student with piano as her main instrument, which may in part explain her strong performance in the tests. But Agatha was studying choir conducting, not music education. From the pre-test results, this strong classical background (10 years of classical studies, including theory, solfège, choir-singing and piano) is evident, as she was the one who got closest to finishing using figured bass to part-write a classical chord progression in four voices. She also showed an adequate knowledge of jazz theory, even though she’d only studied it for six months in her bachelor’s degree and had relatively no experience of jazz piano and improvisation.

In previous studies she had learnt both classical and jazz harmony mainly by analysing scores, but this had also been supplemented with real musical

activities such as singing and playing the piano, which she'd preferred. Indeed, she would have liked there to have been more practical activities such as these, so she had also taken an optional course to learn a more practical approach to learning jazz harmony. Another reason for taking this course was because she also wanted to see theory in practice.

In this course, Agatha enjoyed using analytical approaches or "*theory explanations*", as well as practical, for learning harmony in both jazz and classical contexts, even if at the same time she found them the most challenging (for example, modal scales, harmonic and melodic minor scales, voicings and analyzing baroque chord progressions). Nevertheless, her strengths in aural recognition, which were a result of her previous education, might have explained why she found the listening tasks the least challenging, and thus did not suggest more aural approaches for the course.

Although she had a high level of piano playing ability, she had some trouble during the course itself with playing jazz walking bass, chords with two hands, and the more complex voicings of jazz chord progression, perhaps due to having practised playing jazz less. She also benefited from writing variations and using improvisation as a musical tools for learning baroque and jazz harmony, but at the same time she found improvisation sometimes challenging - "*I need more practising but it was helpful*". Perhaps for this reason she felt most comfortable group improvising in either genre. By the end of the course, in her opinion, the best approach for learning harmony was still score reading by analysis. Meanwhile practical approaches, such as singing and playing, remained the most enjoyable for her, as they had been at the start.

Simone

Overall Simone scored overall weaker in both tests than the other students.

Pre-test:

The only task she managed without a problem was listening to and identifying four chord progressions played on the piano. She made a number of mistakes in both the tasks that involved part-writing of classical chord progressions in four voices, as well as various mistakes in most of the jazz tasks involving analyzing and writing chords. Analysis tasks were perhaps difficult for her as she seemed to lack much of the classical terminology required.

Post-test:

The only task she managed without a problem was analysing a baroque foglia theme and variation in Roman numerals. She was not able to successfully answer any of the tasks which involved identifying, analyzing and writing either jazz chords with colourations/extensions, or cycle of fifth and jazz II-V-I chord progressions.

Simone perhaps had more trouble in the tests than most others because she was only a first year musicology student at the time of the course. She was specializing in singing and her main instrument was the violin. In the pre-test she showed a weak knowledge of classical theory, with many tasks incomplete, even though on paper she had spent 7 years studying classical music (two years

of piano, four of classical theory, and four years singing in different choirs). On the other hand, in spite of taking few jazz piano lessons, and only one course in jazz theory previously, she showed a satisfactory basic knowledge of jazz. Previously her only experience of improvising had been alone with her violin, or with her teacher when singing. She had learnt classical harmony mainly by analysis from score - "*classical [...] always reminded [her] of the theoretical*" - whereas, like many of the other participants, she "*used jazz harmony more in practical music playing*".

She suggested more listening and creative activities for the course, especially for learning classical harmony and she wanted less emphasis on analysis and a less rigid interpretation of style. It was evident why she suggested these approaches, as activities which involved aural recognition by singing (from the piano or a recording); or singing and playing; or even reading the score were challenging tasks for her. A main reason for some of these problems probably stemmed from never having been formally taught or trained in solfège: "*I learned to read notes as 7-year old, but I've never been fluent at it, always singing and playing everything from hearing. Teachers at music school probably did not see this...*". She realised that difficulties with score reading probably had a knock-on effect for her piano skills later, mentioning that "*more patience and explanation in practice [...] would be important for learning*". In spite of her many challenges, she was probably the most enthusiastic and active participant during the course. Although some encouragement was needed to get her to start improvising as part of a group, eventually she counted improvisation (both alone and in groups) as one of the most enjoyable activities of the course. In addition, she found writing variations a very helpful way to learn jazz and classical harmony as well as learning the features both styles have in common.

Anna

Overall, Anna had very good results in both tests.

Pre-test:

She successfully accomplished all the tasks in both styles that dealt with analysis, such as the classical four-voice choral excerpt in Roman numerals; identifying non-harmony notes in a melody embellishment; the late Romantic excerpt from lead-sheet chord symbols, and analysis of jazz chords in close position from lead-sheet symbols. Even the aural identification of four chord progressions played on the piano to determine key stylistic features was successful. There were only a few mistakes overall in the writing jazz chord and part-writing tasks, with only the part-writing of a classical chord progression in four voices using figured bass half solved.

Post-test:

Her analysis of a baroque *fogliata* theme and variation in Roman numerals, with identification of the non-harmony notes was exemplary, and there were only a few mistakes overall in the tasks of writing jazz II-V-I chord progressions with colourations/extensions. She found it slightly more difficult, however,

identifying cycle of fifth and jazz II-V-I chord progressions (with colourations/extensions) through listening.

Anna was in the final year of her two-year Masters program in Music, Mind and Technology and her main instruments were piano, flute and singing. In the pre-test her strong classical knowledge was evident, as she made a valiant attempt to use figured bass for part-writing in four voices. This knowledge was rooted in 10 years of classical studies that comprised of 10 years of piano; three years of classical theory and private singing lessons; four years of solfège; and five years singing classical jazz and soul music in choirs. Good jazz theory knowledge could also be seen, but this had been self-taught rather than formally studied. Like many of the others, her formal studies had consisted more of classical harmony through score analysis *“the basics with exercises”*, which focused on the *“rules and limitations”*, and she was also in the habit of improvising alone. She found the most beneficial way to learn harmony was by acquiring sufficient theoretical knowledge that could then be applied in active music making. However, before the course she stressed that the most enjoyable approaches for learning harmony had been for her written exercises and piano playing.

The only suggestions for the course were for more aural approaches. Indeed, during the course she found a number of ways for learning harmony using both aural recognition and analysis, but this depended on the task. She had some problems with recognizing terms through simply listening without the help of piano - *“...just listening to them without knowing which tone is played is hard”*. Similarly, she found singing tunes from the score quite challenging - *“without the help of piano, just reading it is a little hard”*. Again, as with several other students, this was down to her previous experience of learning by score analysis and comparative lack of practice of learning aurally. As she put it, *“I used to analyze from note and visual data rather just aurally”*. She found the tasks of playing the piano and writing bass variations on a given baroque and jazz theme challenging, but it became apparent that this was due to her being a little out of practice *“...because of [sic] left hand...that is not enough skillful as right hand [...] it is a little hard to synchronize it with right hand”*. At the same time she found writing variations a useful way to learn harmony in both styles, helping her *“to discover other possibilities in that harmony”*. Some lack of systematic training in jazz theory and weaker skills in inner hearing might have accounted for the fact that she found it difficult to match different modal scales to chords and to improvise with them. Similarly, in the pre-test she managed quite well the basic jazz tasks, while in the post-test she had more difficulty with advanced jazz harmony. This was probably due to less formal grounding in jazz theory and aural recognition. Her opinion about the role of improvisation was two-fold: on the one hand she found it beneficial because it trains the ear and memory; but on the other, she did not find it a helpful way to connect jazz and classical harmony, nor for learning jazz harmony. She preferred to learn first the theoretical knowledge, then to put it into practice - *“so for me it is easier to know the harmony first to be able to improvise”*.

By the end of the course, in her opinion, the most useful approach for learning harmony was still analysis followed by practice, but as she slowly started to focus more on the listening, she dared to rely more on her aural abilities.

Katie

Katie performed overall slightly weaker in both tests than the other students.

Pre-test:

She managed only some of the analysis tasks with few mistakes, namely the classical four-voice choral excerpt in Roman numerals, and the analysis of basic jazz chords in close position from lead-sheet symbols, but she had more problems in voice leading, voice doubling, and chords in the tasks which involved part-writing in four voices and the aural identification of four chord progressions played on the piano to determine key stylistic features. The fact that she left out entirely the task of using figured bass to part-write a classical chord progression in four voices was not surprising since the majority of students did the same. Nevertheless it was remarkable that she did not touch either of the writing jazz chord tasks, since she was the only student majoring in jazz singing of the group.

Post-test:

It was good to see that her overall performance was better in this test, particularly with respect to the jazz tasks that had been left out at the pre-test, and which were now completed almost perfectly (using lead-sheet symbols to identify basic jazz chords through listening; writing basic jazz chords in close position from lead-sheet symbols; and analysing a baroque foglia theme and variation in Roman numerals, with identification of the non-harmony notes). The only mistakes were not identifying the non-harmony notes in the latter task, and with the colourations /extensions of the more advanced jazz chords of other tasks.

These results were perhaps explained by the fact that she was a fourth year student of jazz/pop singing with a good balance between the two genres in her previous education (five years studying classical piano, classical theory and solfège, as well as two or three years singing in different choirs; three years studying jazz singing and jazz theory; and two years of piano with improvisation, in addition to the singing). The weak results in the pre-test were apparently due to having forgotten a lot of terminology because she had been more recently focusing on her jazz singing studies, in spite of her extensive classical background in aural recognition and score analysis, and the way she had learnt classical harmony back then anyway had been precisely lacking practical musical activities. But it was remarkable that this lack of practical application not only applied to her classical studies, but also the jazz (which she had only learnt through score analysis and listening). She nevertheless made the same distinction between the genres as other students: *“in classical music you have particular rules, how to do things, but in jazz you do not have it... teachers teach and you write things down and try to understand. Home-work’s also far away from*

practical things. [...] I do not enjoy it [learning harmony] because those things are difficult for me". This reasoning still did not prove to me why she left out the basic jazz chord writing tasks entirely in the pre-test, and these issues remain unexplained in my analysis.

Referring to the shortcomings in her previous classical and jazz harmony education, she suggested more "*learning by doing*" techniques for learning harmony, with more of an emphasis on aural approaches and a better balance between theory and practice. By the end of the course she had indeed found these aural approaches the most effective. She also acknowledged the benefits of analysis, but only after internalizing the music first by listening to it or playing it on an instrument. This idea of using analysis to systematize information after the event, perhaps shows her preference for jazz over classical harmony. Nevertheless she expressed enjoyment learning both styles simultaneously as she found it "*very interesting when [she] found similarities in both theories*". Unfortunately, because she was absent for 30% of the course, she could not express her opinions about learning jazz harmony in Q2, and apart from the video recordings there is also very little data about improvisation. Nevertheless, at the end of the course she mentioned that "*improvisation is helpful when you know the rules of jazz*". These positive comments about the benefits of music theory are reflected in her performance in the theoretical jazz tasks of the post-test.

Ed

Overall Ed scored slightly weaker in both tests than the other students.

Pre-test:

He was very good at two of the classical tasks (analysis of a classical four-voice choral excerpt in Roman numerals and identifying non-harmony notes in a Romantic excerpt) as well as the aural task listening and identifying four chord progressions to determine stylistic features. However, lots of mistakes were revealed in the other tasks, perhaps due to misunderstanding chord markings in three cases (analysis of a late Romantic excerpt from lead-sheet chord symbols; analysis of basic jazz chords in close position from lead-sheet symbols; and writing jazz chords with colour notes). As regards using Roman numerals and figured bass in the part-writing however, Ed seemed to be quite unfamiliar with the stylistic features of voice-leading. Writing basic jazz chords from lead-sheet symbols was entirely left out, and yet he made an attempt at the writing task for more advanced jazz chords.

Post-test:

Tasks were completed with very diverse results. On the one hand, success in writing jazz II-V-I chord progressions using piano-voicing from Roman numerals with colourations/extensions; analysing a baroque foglia theme and variation; and writing basic jazz chords in close position from lead-sheet symbols suggested that he had managed to learn about most of the elements of jazz voicing with only the more advanced versions of those tasks remaining

unsolved, and weak results in identifying cycle of fifth and jazz II-V-I chord progressions.

Like Anna, Ed was also finishing his Master's degree in Music, Mind and Technology, and his main instrument was the trumpet. His average to good results for classical harmony in the pre-test might be the result of six years of classical studies (music performance studies with horns at university and music school; two years of piano and classical theory; almost two years of solfège; and a few years singing mainly baroque and contemporary music in different choirs). A weaker performance in the jazz tasks reflected less experience in this genre (two years of jazz studies, without any formal jazz theory except self-taught for half a year; one year jazz piano; and informal improvisation of jazz in bands). As others, he learnt classical harmony mostly by analysis, but also with some aural recognition. This was perhaps why, like Agatha, he also suggested learning harmony by putting theory into practice. This was so he could connect it to real music and his more informal learning experiences, or in his terms *"it should be more product-oriented towards performance and composition and less abstract"*.

He found the most beneficial way of learning harmony was first by aural recognition: *"an aural approach offers much to someone learning jazz harmony. Very important to connect what I hear others play with what I play myself"*. The second most important way was through practical music activities such as playing the piano, he felt, because *"being able to actually hear the chords makes it much easier to decide which tones to leave out of the chords"*. At the same time, he found putting theory into practice through playing the piano fairly challenging due to lack of recent practice, but by the end of the course this was still his priority, and this can be seen by the way he split his choices equally between the three approaches in Q2.

The improvement in his jazz theory performance in the post-test showed that he needed to organize theoretical information that was previously learnt informally by verifying it through a practical approach. Yet score analysis was nevertheless still important, especially in classical harmony, and he particularly liked the tasks which connected the styles, such as writing variations and improvisation *"it is excellent to have a solid foundation in both jazz and classical harmonies"*. Improvisation remained challenging nonetheless in both styles, but it improved well during the course. He found it most comfortable in the classical context to improvise mostly alone, on the piano, whereas jazz was better in a group.

APPENDIX E

Study Two: Questionnaire Q1
 Questionnaire Q2
 Questionnaire Q3
 Final questionnaire FQ

Questionnaire No.1

1. Name:.....
 Institution:.....
 Year (level):.....
 Major studies:.....

How many years have you learnt classical harmony?.....
 How many years have you learnt jazz harmony?.....
 How many years have you had solfège or ear-training)?.....
 How many years have you played classical piano?.....
 How many years have you played jazz piano?.....
 How many years have you improvised?.....

2. How much did you use the following activities in your previous harmony (music theory) or aural (solfège , ear-training) studies? Please indicate on the scale.

CLASSICAL STYLE: (also Baroque and Romantic)

-Learning / memorizing music by listening----- 1--2--3--4--5--6--7
 -Learning / memorizing music by reading score----- 1--2--3--4--5--6--7
 -Recognizing / analyzing music by listening----- 1--2--3--4--5--6--7
 -Recognizing / analyzing score by singing or playing---- 1--2--3--4--5--6--7
 -Recognizing / analyzing score by reading silently----- 1--2--3--4--5--6--7
 -Writing music from piano playing----- 1--2--3--4--5--6--7
 -Writing music from recording----- 1--2--3--4--5--6--7
 -Singing / playing tasks on piano----- 1--2--3--4--5--6--7
 -Improvising by singing alone----- 1--2--3--4--5--6--7
 -Improvising by singing in pairs / group----- 1--2--3--4--5--6--7
 -Improvising on piano alone----- 1--2--3--4--5--6--7
 -Improvising on piano in pairs / groups----- 1--2--3--4--5--6--7
 -Play-along (or sing-along) with recordings and score---- 1--2--3--4--5--6--7
 -Composing music----- 1--2--3--4--5--6--7

JAZZ:

- Learning / memorizing music by listening----- 1--2--3--4--5--6--7
- Learning / memorizing music by reading score----- 1--2--3--4--5--6--7
- Recognizing / analyzing music by listening----- 1--2--3--4--5--6--7
- Recognizing / analyzing score by singing or playing---- 1--2--3--4--5--6--7
- Recognizing / analyzing score by reading silently----- 1--2--3--4--5--6--7
- Writing music from piano playing----- 1--2--3--4--5--6--7
- Writing music from recording----- 1--2--3--4--5--6--7
- Singing / playing tasks on piano----- 1--2--3--4--5--6--7
- Improvising by singing alone----- 1--2--3--4--5--6--7
- Improvising by singing in pairs / group----- 1--2--3--4--5--6--7
- Improvising on piano alone----- 1--2--3--4--5--6--7
- Improvising on piano in pairs / groups----- 1--2--3--4--5--6--7
- Play-along (or sing-along) with recordings and score---- 1--2--3--4--5--6--7
- Composing music----- 1--2--3--4--5--6--7

3. How much did you find these tasks useful? Please indicate on the scale.

CLASSICAL STYLE: (also Baroque and Romantic)

- Learning / memorizing music by listening----- 1--2--3--4--5--6--7
- Learning / memorizing music by reading score----- 1--2--3--4--5--6--7
- Recognizing / analyzing music by listening----- 1--2--3--4--5--6--7
- Recognizing / analyzing score by singing or playing---- 1--2--3--4--5--6--7
- Recognizing / analyzing score by reading silently----- 1--2--3--4--5--6--7
- Writing music from piano playing----- 1--2--3--4--5--6--7
- Writing music from recording----- 1--2--3--4--5--6--7
- Singing / playing tasks on piano----- 1--2--3--4--5--6--7
- Improvising by singing alone----- 1--2--3--4--5--6--7
- Improvising by singing in pairs / group----- 1--2--3--4--5--6--7
- Improvising on piano alone----- 1--2--3--4--5--6--7
- Improvising on piano in pairs / groups----- 1--2--3--4--5--6--7
- Play-along (or sing-along) with recordings and score---- 1--2--3--4--5--6--7
- Composing music----- 1--2--3--4--5--6--7

JAZZ:

- Learning / memorizing music by listening----- 1--2--3--4--5--6--7
- Learning / memorizing music by reading score----- 1--2--3--4--5--6--7
- Recognizing / analyzing music by listening----- 1--2--3--4--5--6--7
- Recognizing / analyzing score by singing or playing---- 1--2--3--4--5--6--7
- Recognizing / analyzing score by reading silently----- 1--2--3--4--5--6--7
- Writing music from piano playing----- 1--2--3--4--5--6--7

-Writing music from recording-----	1--2--3--4--5--6--7
-Singing / playing tasks on piano-----	1--2--3--4--5--6--7
-Improvising by singing alone-----	1--2--3--4--5--6--7
-Improvising by singing in pairs / group-----	1--2--3--4--5--6--7
-Improvising on piano alone-----	1--2--3--4--5--6--7
-Improvising on piano in pairs / groups-----	1--2--3--4--5--6--7
-Play-along (or sing-along) with recordings and score----	1--2--3--4--5--6--7
-Composing music-----	1--2--3--4--5--6--7

4. How skillful or competent do you think you are in these tasks?

CLASSICAL STYLE: (also Baroque and Romantic)

-Learning / memorizing music by listening-----	1--2--3--4--5--6--7
-Learning / memorizing music by reading score-----	1--2--3--4--5--6--7
-Recognizing / analyzing music by listening-----	1--2--3--4--5--6--7
-Recognizing / analyzing score by singing or playing----	1--2--3--4--5--6--7
-Recognizing / analyzing score by reading silently-----	1--2--3--4--5--6--7
-Writing music from piano playing-----	1--2--3--4--5--6--7
-Writing music from recording-----	1--2--3--4--5--6--7
-Singing / playing tasks on piano-----	1--2--3--4--5--6--7
-Improvising by singing alone-----	1--2--3--4--5--6--7
-Improvising by singing in pairs / group-----	1--2--3--4--5--6--7
-Improvising on piano alone-----	1--2--3--4--5--6--7
-Improvising on piano in pairs / groups-----	1--2--3--4--5--6--7
-Play-along (or sing-along) with recordings and score----	1--2--3--4--5--6--7
-Composing music-----	1--2--3--4--5--6--7

IAZZ:

-Learning / memorizing music by listening-----	1--2--3--4--5--6--7
-Learning / memorizing music by reading score-----	1--2--3--4--5--6--7
-Recognizing / analyzing music by listening-----	1--2--3--4--5--6--7
-Recognizing / analyzing score by singing or playing----	1--2--3--4--5--6--7
-Recognizing / analyzing score by reading silently-----	1--2--3--4--5--6--7
-Writing music from piano playing-----	1--2--3--4--5--6--7
-Writing music from recording-----	1--2--3--4--5--6--7
-Singing / playing tasks on piano-----	1--2--3--4--5--6--7
-Improvising by singing alone-----	1--2--3--4--5--6--7
-Improvising by singing in pairs / group-----	1--2--3--4--5--6--7
-Improvising on piano alone-----	1--2--3--4--5--6--7
-Improvising on piano in pairs / groups-----	1--2--3--4--5--6--7
-Play-along (or sing-along) with recordings and score----	1--2--3--4--5--6--7
-Composing music-----	1--2--3--4--5--6--7

Questionnaires Q2 and Q3
(Groups in the improvisation phases)

Name:.....
 Institution:.....
 Level (Year of studies):.....
 Major studies:.....

How much did you find these tasks useful? Please indicate on the scale.
 1= lowest ----- 7= highest

BAROQUE STYLE:

-Learning / memorizing music by listening silently----- 1--2--3--4--5--6--7
 -Recognizing music by listening/singing/playing back---- 1--2--3--4--5--6--7
 -Analyzing score by singing or playing----- 1--2--3--4--5--6--7
 -Recognizing / analyzing score by reading silently----- 1--2--3--4--5--6--7
 -Writing music from piano playing (dictation)----- 1--2--3--4--5--6--7
 -Writing music from recording----- 1--2--3--4--5--6--7
 -Singing / playing tasks on piano----- 1--2--3--4--5--6--7
 -Improvising on the piano alone----- 1--2--3--4--5--6--7
 -Improvising on the piano in pairs / group----- 1--2--3--4--5--6--7
 -Play-along (sing-along) with recordings and score----- 1--2--3--4--5--6--7

JAZZ STYLE:

-Learning / memorizing music by listening silently----- 1--2--3--4--5--6--7
 -Recognizing music by listening/singing/playing back---- 1--2--3--4--5--6--7
 -Analyzing score by singing or playing----- 1--2--3--4--5--6--7
 -Recognizing / analyzing score by reading silently----- 1--2--3--4--5--6--7
 -Writing music from piano playing (dictation)----- 1--2--3--4--5--6--7
 -Writing music from recording----- 1--2--3--4--5--6--7
 -Singing / playing tasks on piano----- 1--2--3--4--5--6--7
 -Improvising on the piano alone----- 1--2--3--4--5--6--7
 -Improvising on the piano in pairs / group----- 1--2--3--4--5--6--7
 -Play-along (sing-along) with recordings and score----- 1--2--3--4--5--6--7

Final questionnaire FQ

1. In which group did you feel that your knowledge of baroque harmony improved more?

Experiment Group (with improvisation)

Control Group (without improvisation)

Comments, reasons:

2. In which group did you feel that your knowledge of **jazz** harmony improved more?

Experiment Group (with improvisation)

Control Group (without improvisation)

Comments, reasons:

3. Do you think that the piano-improvisation is helpful for learning

- baroque harmony? Comments, reasons:

- Jazz harmony? Comments, reasons:

4. Do you think that the piano-improvisation is helpful to develop your aural skills: for example the musical hearing, inner-hearing?

Comments, reasons:

5. How important or useful do you think it is to learn baroque harmony together with jazz harmony? Comments, reasons:

APPENDIX F

Study Two: Pre-Harmony test Key to Pre-Harmony test

Harmony pre-test

1. Which intervals do you hear “larger” played on the piano?
Write the mark < or > between the intervals A and B:

A B A B A B A B A B

2. Identify the following 5 intervals played on the piano. Choose from the followings:

Major 2 (M2); Perfect 5 (P5); minor 6 (m6); Major 7 (M7); Augmented 4 (A4)

1.	2.	3.	4	5.
----	----	----	---	----

3. Listen and write up the 4 intervals spaced on the given notes:



4. Identify which of the following 4 triads sounds Major or minor played on the piano. Choose from the followings:

Major (M); minor (m)

1.	2.	3.	4
----	----	----	---

5. Identify which of the following 4 triads sounds Augmented or diminished played on the piano. Choose from the followings:

Augmented (M); diminished (d)

1.	2.	3.	4
----	----	----	---

6. Identify the inversion of the following 4 triads played on the piano. Choose from the followings:

First inversion (6); Second inversion ($\frac{6}{4}$)

1.	2.	3.	4
----	----	----	---

7. Listen and write up the 4 triads in different position (including root position!) spaced on the given notes:



8. Identify which of the following 4 seventh chords in root position sounds Major or minor played on the piano. Choose from the followings:

- Major triad with Major 7 (Maj7)
- minor triad with minor 7 (m7)
- Major triad with minor 7 (Dominant 7)
- minor triad with Major 7 (mMaj7)

1.	2.	3.	4
----	----	----	---

9. Identify which of the following 5 seventh chords in root position sounds Augmented or diminished played on the piano. Choose from the followings:

- Augmented triad with Major 7 (AugMaj7)
- Augmented triad with minor 7 (Aug7)
- diminished triad with Major 7 (dimMaj7)
- diminished triad with minor 7 (half diminished 7) ($\emptyset 7$)
- diminished triad with diminished 7 (full diminished 7) (o7)

1.	2.	3.	4	5.
----	----	----	---	----

10. Identify the inversion of the following 4 seventh chords played on the piano. Choose from the followings:

First inversion ($\frac{6}{5}$); Second inversion ($\frac{4}{3}$); Third inversion (2)

1.	2.	3.	4
----	----	----	---

11. Listen and write up the 4 seventh chords (including root position!) in different position spaced on the given notes:



12. Which of the 2 voices did you hear form the following chorale?
 (soprano, alto, tenor or bass).....

13. Write down the soprano and bass melody of the following 3 baroque variations after dictation.

Variation 1.

Variation 2.

Variation 3.

14. Work out the following chord progression in 4 voices (bass included). Write the chord markings underneath with Roman numerals in the right key.

15. Analyse the following baroque variation by Roman numerals and Lead Sheet Symbols: (There is an irregular parallel motion on the bar 4)

Canon in D

16. Which of the following patterns did you hear? Tick only one.

1.

2.

3.

17. Write down the following jazz patterns after dictation:
 Pattern 1.

Pattern 2.

18. Identify the following chords by Lead Sheet Symbols:

19. Write the following chords:

Gm7	C7	F6	B ^b Maj7	Em7/b5
Gm7/9	C7/9/13	F6/9	B ^b Maj7/9	Esus Ø

20. You will hear four chord progressions played on the piano. Give analysis in Roman numerals, identify the keys (major and minor) and the chords by Lead Sheet Symbols (extensions, added notes, colour notes etc.)

- A/
- B/
- C/
- D/

21. Work out the II-V-I chord progressions in both keys following the given voicing on the treble staff:

G:IIIm7/9 V7/9 IMaj7/9 d:II^ø V7/b9 Im7/9

KEY to Harmony pre-test

1. Which intervals do you hear "larger" played on the piano?
Write the mark < or > between the intervals A and B: (played 1X)

A B A B A B A B A B
m2 < M7 m3 < M6 m7 > A4 m6 > M3 M2 > m2

2. Identify the following 5 intervals played on the piano. Choose from the followings: (played 1X)

Major 2 (M2); Perfect 5 (P5); minor 6 (m6); Major 7 (M7); Augmented 4 (A4)

1. P5	2. M7	3. A4	4. M2	5. m6
-------	-------	-------	-------	-------

3. Listen and write up the 4 intervals spaced on the given notes: (1X together, 1X broken)

4. Identify which of the following 4 triads sounds Major or minor played on the piano. Choose from the followings: (played 1X)

Major (M); minor (m)

1. m (6)	2. M (root)	3. m ($\frac{6}{4}$)	4. m (root)
----------	-------------	------------------------	-------------

5. Identify which of the following 4 triads sounds Augmented or diminished played on the piano. Choose from the followings: (played 2X)

Augmented (M); diminished (d)

1. A	2. d (root)	3. d ($\frac{6}{4}$)	4. A
------	-------------	------------------------	------

6. Identify the inversion of the following 4 triads played on the piano. Choose from the followings: First inversion ($\frac{6}{4}$); Second inversion ($\frac{6}{4}$) (played 2X, 2nd broken)

1. ($\frac{6}{4}$) (M)	2. 6 (m)	3. ($\frac{6}{4}$) (dim)	4. 6 (m)
--------------------------	----------	----------------------------	----------

7. Listen and write up the 4 triads in different position (including root position!) spaced on the given notes: (3X, 3rd broken)



8. Identify which of the following 4 seventh chords in root position sounds Major or minor played on the piano. Choose from the followings: (3X, 3rd broken)

- Major triad with Major 7 (Maj7)
- minor triad with minor 7 (m7)
- Major triad with minor 7 (Dominant 7)
- minor triad with Major 7 (mMaj7)

1. 7	2. m Maj7	3. Maj 7	4. m7
------	-----------	----------	-------

9. Identify which of the following 5 seventh chords in root position sounds Augmented or diminished played on the piano. Choose from the followings: (3X, 3rd broken)

- Augmented triad with Major 7 (AugMaj7)
- Augmented triad with minor 7 (Aug7)
- diminished triad with Major 7 (dimMaj7)
- diminished triad with minor 7 (half diminished 7) (\emptyset 7)
- diminished triad with diminished 7 (full diminished 7) (o7)

1. half dim7	2. dim Major7	3. Aug 7	4. full dim7	5. Aug Maj7
--------------	---------------	----------	--------------	-------------

10. Identify the inversion of the following 4 seventh chords played on the piano. Choose from the followings: (4X, last 2 broken)

First inversion ($\frac{6}{5}$); Second inversion ($\frac{4}{3}$); Third inversion (2)

1. ($\frac{6}{5}$) (Dominant7)	2. ($\frac{4}{3}$)(Maj7)	3. 2 (m7)	4. ($\frac{6}{5}$)(mMaj7)
----------------------------------	----------------------------	-----------	-----------------------------

11. Listen and write up the 4 seventh chords (including root position!) in different position spaced on the given notes: (4X, last 2 broken)



12. Which of the 2 voices did you hear form the following chorale? (soprano, alto, tenor or bass) (played 1X).....SOPRANO & TENOR.....

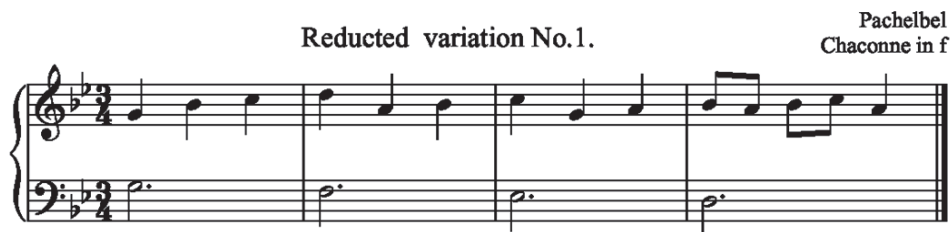


13. Write down the soprano and bass melody of the following 3 baroque variations after dictation. (Played 5X)

Variation 1.



Variation 2.



Variation 3.

Reduced variation No. 15.

Pachelbel
Chaconne in f

14. Work out the following chord progression in 4 voices (bass included).
Write the chord markings underneath with Roman numerals in the right key.

Possible solution of voice leading No. 1.

Possible solution of voice leading No. 2.

Possible solution of voice leading No. 3.

15. Analyse the following baroque variation by Roman numerals and Lead Sheet Symbols: (There is an irregular parallel motion on the bar 4)

Canon in D

D: I V VI III IV I IV V⁷ I
 D A Bm F#m G D G A7 D

16. Which of the following patterns did you hear? Tick only one. (played 1X)

1.

Dm7 G7 CMaj7 Charlie Parker

2.

Dm7 G7 CMaj7 Charlie Parker

3.

Dm7 G7 CMaj7 Charlie Parker

17. Write down the following jazz patterns after dictation:

Pattern 1. (played 6X)

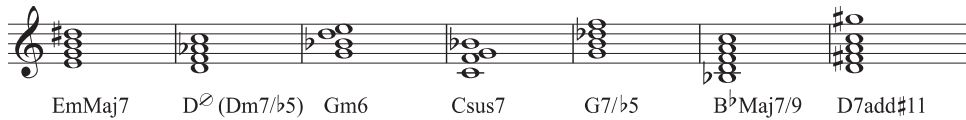
Tommy Flanagan

Pattern 2. (played 8X)

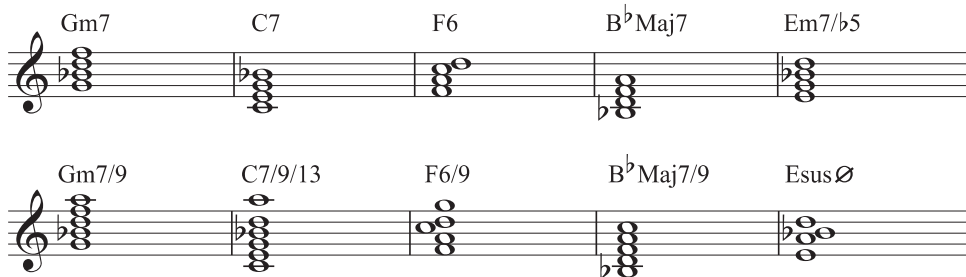
Charlie Parker



18. Identify the following chords by Lead Sheet Symbols:



19. Write the following chords:



20. You will hear four chord progressions played on the piano. Give analysis in Roman numerals, identify the keys (major and minor) and the chords by Lead Sheet Symbols (extensions, added notes, colour notes etc.) (played 3x)

A/.....II - V - I in Major...../ IIm7 - V7 - Imaj7.....(in Major).....
 e.g.: C: Dm7 - G7 - CMaj7

B/.....II - V - I in Major...../ IIm7/9 - V7/9 - I69.....(in Major).....
 e.g.: C: Dm7/9 - G7/9 - C69

C/.....II - V - I in minor...../ IIm7/b5 - V7/b9 - ImMaj7.....(in minor).....
 e.g.: a: Bm7/b5 - E7/b9 - AmMaj7

D/.....Cycle of Fifth chord progression with 7 and 9../

IVm7/9 - VII7/9 - IIIMaj7/9 - VIMaj7/9 - Iim7/b9/b5 - V7/b9 - ImMaj7/9

21. Work out the II-V-I chord progressions in both keys following the given voicing on the treble staff:

G:IIIm7/9 V7/9 IMaj7/9 d:II[∅] V7/b9 Im7/9

APPENDIX G

Study Two: Lesson plans

Handouts of musical examples (scores, lead-sheets, supplementary music theory material, chord summaries)

Lesson plans

First part of course – Autumn semester

Lesson One: Pre Harmony test

Improvisation test of Early Improvisation Group

Tasks and Activities BAROQUE:	Early Improvisation Group Lesson 2	Late Improvisation Group Lesson 2
Learning / memorizing music by listening silently	Pachelbel: Chaconne in f from recording	Pachelbel: Chaconne in f from recording
Recognizing music by listening / singing and playing back	Pachelbel: Chaconne's chord progressions: i-v6-iv6-V / i-VII-VI-V	Pachelbel: Chaconne's chord progressions: i-v6-iv6-V / i-VII-VI-V
Analysing score by singing and playing	Handel: Chaconne in G i-v6-iv6-V chord variants	Handel: Chaconne in G i-v6-iv6-V chord variants
Recognizing / analyzing score by reading silently		
Transcribing music from piano playing (dictation)		Handel: Chaconne's bass variations
Transcribing music from recording		
Singing / playing tasks on piano	i-v6-iv6-V / i-VII-VI-V free & irregular voice-leading	i-v6-iv6-V & Cycle of Fifths irregular voice-leading
Improvising on the piano alone		

Improvising on piano with peers	Major chord and scale i-v6-iv6-V	
Play-along (or sing-along) with recordings and score	7	
JAZZ:	Lesson 2	Lesson 2
Learning / memorizing music by listening silently	Autumn Leaves: different recordings, B. McFerrin: pentatonic sound	Autumn Leaves: different recordings,
Recognizing music by listening / singing and playing back	Autumn Leaves	Autumn Leaves
Analysing score by singing and playing	Autumn Leaves	Autumn Leaves: chords & bass
Recognizing / analyzing score by reading silently		
Transcribing music from piano playing (dictation)		
Transcribing music from recording		
Singing / playing tasks on piano		
Improvising on the piano alone		
Improvising on piano with peers	Pentatonic scale: question -answer, with grooves	
Play-along (or sing-along) with recordings and score		Autumn Leaves: intro, bass

Tasks and Activities BAROQUE:	Early Improvisation Group Lesson 3	Late Improvisation Group Lesson 3
Learning / memorizing music by listening silently	i-v6-iv6-V voice leading, melody embellishments	i-v6-iv6-V voice leading, melody embellishments
Recognizing music by listening / singing and playing back	Pachelbel, Handel's Chaconne, i-v6-iv6-V, bass & melody embellishments	Pachelbel, Handel's Chaconne, i-v6-iv6-V, bass & melody embellishments
Analysing score by singing and playing		
Recognizing / analyzing score by reading silently		Handel and Pachelbel: Chaconne: melody variants
Transcribing music from piano playing (dictation)		Handel: Chaconne's bass variations
Transcribing music from recording	Variations' melody embellishments	
Singing / playing tasks on piano	i-v6-iv6-V, bass & melody embellishments	i-v6-iv6-V & Cycle of Fifths irregular voice-leading
Improvising on the piano alone		
Improvising on piano with peers	i-v6-iv6-V improvising variations	
Play-along (or sing-along) with recordings and score		
JAZZ:	Lesson 3	Lesson 3
Learning / memorizing	Chords, chord pro-	Autumn Leaves: other

music by listening silently	gression of Autumn Leaves	recordings
Recognizing music by listening / singing and playing back	Autumn Leaves: Rhythm: swing feel, Cycle of Fifth	Autumn Leaves: Rhythm: swing feel, Cycle of Fifth, II-V-I, colourations, bass notes
Analysing score by singing and playing		Autumn Leaves: chords & bass
Recognizing / analyzing score by reading silently	Cycle of Fifth	Cycle of Fifth
Transcribing music from piano playing (dictation)		
Transcribing music from recording		Cycle of Fifth with triads, 7ths,
Singing / playing tasks on piano		
Improvising on the piano alone		
Improvising on piano with peers	P5 interval, Major scales, overtones	
Play-along (or sing-along) with recordings and score		

Tasks and Activities BAROQUE:	Early Improvisation Group Lesson 4	Late Improvisation Group Lesson 4
Learning / memorizing	Handel's Chaconne in G:	Handel: Chaconne varia-

music by listening silently	variations in g minor	tions, middle voices
Recognizing music by listening / singing and playing back	Handel: Chaconne chord variants	
Analysing score by singing and playing		
Recognizing / analyzing score by reading silently		Handel: Chaconne variations, middle voices
Transcribing music from piano playing (dictation)		
Transcribing music from recording		
Singing / playing tasks on piano		
Improvising on the piano alone	i-v6-iv6-V, bass & melody embellishments	
Improvising on piano with peers	i-v6-iv6-V, bass & melody embellishments	
Play-along (or sing-along) with recordings and score		
JAZZ :	Lesson 4	Lesson 4
Learning / memorizing music by listening silently	Autumn Leaves: teacher's playing, recording	Autumn Leaves, Swing-feel, rhythm variants
Recognizing music by listening / singing and playing back	Autumn Leaves, swing feel, chord voicing possibilities	Autumn Leaves , different rhythm in theme
Analysing score by	Autumn Leaves, differ-	Swing-feel, theme-rhythm

singing and playing	ent rhythm and chords	variants
Recognizing / analyzing score by reading silently	Autumn Leaves, different rhythm and chords	Swing-feel, theme rhythm variants
Transcribing music from piano playing (dictation)	Autumn Leaves: Rhythm and chord variants into lead sheet	
Transcribing music from recording	Rhythm variants into lead sheet from M. Davis solo	Autumn Leaves melody variants
Singing / playing tasks on piano		Cycle of Fifths chord variants on handout
Improvising on the piano alone		
Improvising on piano with peers		
Play-along (or sing-along) with recordings and score		Autumn Leaves: bass, chord accompaniment

Tasks and Activities BAROQUE:	Early Improvisation Group Lesson 5	Late Improvisation Group Lesson 5
Learning / memorizing music by listening silently	Scales, minor chords, cadences, Cycle of Fifths	Handel: Chaconne variations, middle voices
Recognizing music by listening / singing and playing back	Variants of cadences, functional substitutions, Cycle of Fifths	Handel: Chaconne variations, middle voices, bass, soprano suspensions
Analysing score by singing and playing	Handel: Chaconne's minor variations, suspensions 76, figured bass	Chaconne variations, figured bass, middle voices, voice leading
Recognizing / analyzing score by reading silently	Cycle of Fifths with triads, 7ths, suspensions	Handel: Passacaglia in G
Transcribing music from piano playing	Chaconne's & Cycle of 5ths variants, suspen-	Chaconne melody variants, Cycle of Fifth, fig-

(dictation)	sions 7 6	ured bass
Transcribing music from recording		Handel: Passacaglia in G bass
Singing / playing tasks on piano		Handel: Chaconne: bass, soprano, middle voices
Improvising on the piano alone		
Improvising on piano with peers		
Play-along (or sing-along) with recordings and score		
JAZZ:	Lesson 5	Lesson 5
Learning / memorizing music by listening silently	Swing-feel, rhythm variants	Swing-feel, rhythm variants
Recognizing music by listening / singing and playing back	Rhythm card: even and triplet feel	Autumn Leaves , swing feel, chord voicing possibilities, rhythm variants
Analysing score by singing and playing		Swing-feel, rhythm variants
Recognizing / analyzing score by reading silently		Swing-feel, rhythm variants
Transcribing music from piano playing (dictation)	Rhythm transcription in swing	Rhythm transcription in swing
Transcribing music from recording		Rhythm variants into lead sheet from M. Davis solo
Singing / playing tasks on piano	Cycle of Fifths chord variants on handout	Cycle of Fifths 7 th chord colourations, II-V-I

Improvising on the piano alone	Autumn Leaves with recording	
Improvising on piano with peers	Autumn Leaves: theme-melody: question-answer	
Play-along (or sing-along) with recordings and score	Autumn Leaves: chord accompaniment, melody	

Tasks and Activities BAROQUE:	Early Improvisation Group Lesson 6	Late Improvisation Group Lesson 6
Learning / memorizing music by listening silently	Handel: Passacaglia in G, cadences, scales	Handel: Passacaglia in G, cadences, scales
Recognizing music by listening / singing and playing back	Handel: Passacaglia in G, variants Cycle of Fifths from handout, II-V-I	Handel: Passacaglia in G, Cycle of Fifths's variants from handout
Analysing score by singing and playing		Handel: Passacaglia in G Cycle of Fifths
Recognizing / analyzing score by reading silently	Handel: Passacaglia in G, Cycle of Fifths	Handel: Passacaglia in G
Transcribing music from piano playing (dictation)	Figured bass example	Variations, ornaments, cycle of fifths variations
Transcribing music from recording		
Singing / playing tasks on piano		Cycle of fifths chord progression variants
Improvising on the piano alone	Handel: Passacaglia in G, Cycle of Fifths	

Improvising on piano with peers	Handel: Passacaglia in G, Chaconne: i-v6-iv6-V, Cycle of Fifths	
Play-along (or sing-along) with recordings and score	Cycle of fifths, Handel Passacaglia in G	Cycle of fifths, Handel Passacaglia in G
JAZZ:	Lesson 6	Lesson 6
Learning / memorizing music by listening silently	Cycle of Fifth, Fly Me to the Moon	Swing-feel, rhythm variants, II-V-I
Recognizing music by listening / singing and playing back	Autumn Leaves, swing feel, chord voicing possibilities, cycle of F.	Autumn L, different rhythm in theme, Swing-feel, rhythm variants, II-V-I
Analysing score by singing and playing	Triads, sevenths, scales, II-V-I	Triads, sevenths, scales II-V-I
Recognizing / analyzing score by reading silently	Fly Me to the Moon	
Transcribing music from piano playing (dictation)	Autumn Leaves: Rhythm and chord variants	
Transcribing music from recording	Rhythm, chord variants to lead sheet, D. Krall's solo	Rhythm variants of chord accompaniments in swing
Singing / playing tasks on piano		Cycle of Fifths chord variants on handout
Improvising on the piano alone	Autumn Leaves	
Improvising on piano with peers	Autumn Leaves, Cycle of Fifth,	
Play-along (or sing-along) with recordings and score	Autumn L.: transposing accompaniment	Autumn Leaves: chord accompaniment in swing

Tasks and Activities BAROQUE:	Early Improvisation Group Lesson 7	Late Improvisation Group Lesson 7
Learning / memorizing music by listening silently		Handel: Chaconne variations, middle voices
Recognizing music by listening / singing and playing back		Handel: Chaconne variations, middle voices, bass, soprano suspensions
Analysing score by singing and playing		Chaconne variations, middle voices, voice leading
Recognizing / analyzing score by reading silently	Handel: Passacaglia in G	Handel: Passacaglia in G
Transcribing music from piano playing (dictation)		Chaconne melody variants, Cycle of Fifth, figured bass
Transcribing music from recording		Handel: Passacaglia in G bass
Singing / playing tasks on piano		Handel: Chaconne: bass, soprano, middle voices
Improvising on the piano alone		
Improvising on piano with peers	Handel: Passacaglia in G, Cycle of Fifths	
Play-along (or sing-along) with recordings and score		

JAZZ:	Lesson 7	Lesson 7
Learning / memorizing music by listening silently		Swing-feel, rhythm variants
Recognizing music by listening / singing and playing back	Singing back II-V-I chord inversions with 7	Autumn Leaves , swing feel, chord voicing possibilities, rhythm variants
Analysing score by singing and playing	II-V-I different voicing in minor	Swing-feel, rhythm variants
Recognizing / analyzing score by reading silently	Different chords with extensions, colourations	Swing-feel, rhythm variants
Transcribing music from piano playing (dictation)	Cycle of Fifths, seventh chords, jazz patterns	Rhythm transcription in swing
Transcribing music from recording	Jazz patterns	Rhythm, chord variants to lead sheet, D. Krall's solo
Singing / playing tasks on piano	II-V-I and cycle of fifth	Cycle of Fifths 7 th chord colourations with 9ths, II-V-I, walking bass structure
Improvising on the piano alone	Cycle of Fifth, Autumn Leaves	
Improvising on piano with peers	Cycle of Fifth, Autumn L.	
Play-along (or sing-along) with recordings and score		Autumn Leaves: chord accompaniment in swing

Tasks and Activities BAROQUE:	Early Improvisation Group Lesson 8	Late Improvisation Group Lesson 8
Learning / memorizing music by listening silently	Pachelbel: Canon, Handel: Messiah No. 6	Pachelbel: Canon, Handel: Messiah No. 6
Recognizing music by	Pachelbel: Canon,	Pachelbel: Canon, chords,

listening / singing and playing back	chords, bass, melody, Handel: Messiah No .6 Cycle of Fifth	bass, melody, Handel: Messiah No. 6 Cycle of Fifth
Analysing score by singing and playing		Handel: Messiah No. 6 Cycle of Fifth
Recognizing / analyzing score by reading silently		
Transcribing music from piano playing (dictation)		Pachelbel: Canon melody and chord variations
Transcribing music from recording		Pachelbel: Canon melody and chord variations
Singing / playing tasks on piano		
Improvising on the piano alone		
Improvising on piano with peers		
Play-along (or sing-along) with recordings and score		
JAZZ:	Lesson 8	Lesson 8
Learning / memorizing music by listening silently		Cycle of fifths with 9ths
Recognizing music by listening / singing and playing back	All types of 7 th chords (summary) II-V-I	Cycle of fifths with 9ths

Analysing score by singing and playing		Cycle of fifths with 9ths
Recognizing / analyzing score by reading silently		Fly Me to the Moon
Transcribing music from piano playing (dictation)	All types of 7 th chords (summary) II-V-I, patterns	II-V-I with 9ths, chord progressions, walking bass
Transcribing music from recording	Melody patterns	
Singing / playing tasks on piano	Cycle of fifth, transposition to different keys, walking bass	II-V-I with various colourations and voicing, walking bass
Improvising on the piano alone		
Improvising on piano with peers	Melody improvisation the theme of Autumn Leaves, walking bass	
Play-along (or sing-along) with recordings and score	Cycle of fifth, transposition to different keys	Cycle of fifth, transposition to different keys, Autumn Leaves theme etc.

Tasks and Activities BAROQUE:	Early Improvisation Group Lesson 9	Late Improvisation Group Lesson 9
Learning / memorizing music by listening silently	Pachelbel: Canon, chords, bass, melody	Purcell: Dido and Aeneas bass and melody
Recognizing music by listening / singing and playing back	Pachelbel: Canon, chords, bass, melody	Pachelbel: Canon, chords, bass, melody
Analysing score by singing and playing	Pachelbel: Canon, chords, bass, melody	Pachelbel: Canon, chords, bass, melody

Recognizing / analyzing score by reading silently	Pachelbel: Canon, chords, bass, melody	Pachelbel: Canon, chords, bass, melody
Transcribing music from piano playing (dictation)	Melody variations on Pachelbel: Canon	I: Dido and Aeneas melody variations
Transcribing music from recording	Chords of Pachelbel: Canon	Chords of Pachelbel: Canon
Singing / playing tasks on piano		Chords of Pachelbel: Canon
Improvising on the piano alone		
Improvising on piano with peers	"Free-style" Melody variations on Pachelbel: Canon	
Play-along (or sing-along) with recordings and score		Pachelbel Canon
JAZZ:	Lesson 9	Lesson 9
Learning / memorizing music by listening silently		Fly Me to the Moon, chords, voices
Recognizing music by listening / singing and playing back	II-V-I different voicing, inversions	Fly Me to the Moon, chords, voices, walking bass
Analysing score by singing and playing		Fly Me to the Moon, chords, voices
Recognizing / analyzing score by reading silently		Fly Me to the Moon, chords, voices
Transcribing music from piano playing (dictation)	II-V-I different voicing. Jazz patterns on II-V-I	Jazz patterns on II-V-I and II-V-I voicing, walking bass
Transcribing music from recording	Jazz patterns on II-V-I	Jazz patterns on II-V-I

Singing / playing tasks on piano		Fly Me to the Moon, Cycle of Fifth
Improvising on the piano alone	II-V-I, cycle of Fifths, jazz walking bass	
Improvising on piano with peers	II-V-I, cycle of Fifths, jazz walking bass	
Play-along (or sing-along) with recordings and score	Jazz walking bass	Fly Me to the Moon melody, bass

Tasks and Activities BAROQUE:	Early Improvisation Group Lesson 10
Learning / memorizing music by listening silently	Purcell: Dido and Aeneas bass and melody
Recognizing music by listening / singing and playing back	Chords, Chord progressions, Pachelbel: Canon
Analysing score by singing and playing	
Recognizing / analyzing score by reading silently	
Transcribing music from piano playing (dictation)	Purcell: Dido and Aeneas bass, melody, chords
Transcribing music from recording	

Singing / playing tasks on piano	
Improvising on the piano alone	bass variations on Pachelbel: Canon
Improvising on piano with peers	Melody, bass and chord variations on Pachelbel: Canon
Play-along (or sing-along) with recordings and score	
JAZZ:	Lesson 10
Learning / memorizing music by listening silently	Fly Me to the Moon, chords, voices
Recognizing music by listening / singing and playing back	II-V- I chord progressions, jazz patterns, voicing etc. (summary)
Analysing score by singing and playing	
Recognizing / analyzing score by reading silently	
Transcribing music from piano playing (dictation)	II-V- I chord progressions, jazz patterns
Transcribing music from recording	
Singing / playing tasks on piano	Fly Me to the Moon, Cycle of Fifth
Improvising on the piano alone	
Improvising on piano with peers	Jazz walking bass, Cycle of Fifth, Autumn Leaves
Play-along (or sing-	Fly Me to the Moon

along) with recordings and score	melody, bass
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Second part of course – Spring semester

Lesson One: Improvisation test of Late Improvisation Group

Tasks and Activities BAROQUE:	Late Improvisation Group Lesson 1	Early Improvisation Group Lesson 1
Learning / memorizing music by listening silently	Pachelbel: Canon: suspensions	Pachelbel: Canon: suspensions
Recognizing music by listening / singing and playing back	Pachelbel: Canon: suspensions	Pachelbel: Canon: suspensions
Analysing score by singing and playing	Pachelbel: Canon: suspensions: 4 3, 6 5	Pachelbel: Canon: suspensions: 4 3, 6 5
Recognizing / analyzing score by reading silently		
Transcribing music from piano playing (dictation)	Pachelbel: Canon: two-part, suspensions, voicing	Pachelbel: Canon: two-part, suspensions, voicing
Transcribing music from recording		
Singing / playing tasks on piano	Stylistic and “free-style” voicing of Pachelbel: C	Stylistic and “free-style” voicing of Pachelbel: C
Improvising on the piano alone		
Improvising on piano with peers	Pachelbel: Canon: melody improvisation on chords	
Play-along (or sing-along) with recordings and score		Pachelbel: Canon
JAZZ:	Lesson 1	Lesson 1

Recognizing music by listening / singing and playing back		
Analysing score by singing and playing	Fly Me to the Moon, bass and theme	Fly Me to the Moon, bass and theme
Recognizing / analysing score by reading silently	Fly Me to the Moon with Roman numerals	
Transcribing music from piano playing (dictation)		
Transcribing music from recording		
Singing / playing tasks on piano		Fly Me to the Moon, bass and theme, rhythm
Improvising on the piano alone		
Improvising on piano with peers		
Play-along (or sing-along) with recordings and score		Fly Me to the Moon, bass and theme, accompaniment rhythm

Tasks and Activities BAROQUE:	Late Improvisation Group Lesson 2	Early Improvisation Group Lesson 2
Recognizing music by listening / singing and playing back	Pachelbel: Canon: suspensions, variations, chords, voicing	Pachelbel: Canon: suspensions, variations
Analysing score by singing and playing	Cadences, Sequences chord-variants: Pachelbel	Cadences, Sequences chord-variants: Pachelbel

Recognizing / analyzing score by reading silently		4-voice writing of chord progression, figured bass
Transcribing music from piano playing (dictation)	4-voice writing of chord progression, figured bass	4-voice writing of chord progression, figured bass
Transcribing music from recording	Pachelbel: melody variations	
Singing / playing tasks on piano	Pachelbel: Canon variations, voicing	Pachelbel: Canon variations, voicing
Improvising on the piano alone		
Improvising on piano with peers		
Play-along (or sing-along) with recordings and score	Pachelbel: Canon: chord progression and variations of melody	Pachelbel: Canon: chord progression and variations of melody
JAZZ:	Lesson 2	Lesson 2
Recognizing music by listening / singing and playing back		All the Things You Are
Analysing score by singing and playing		
Recognizing / analyzing score by reading silently		
Transcribing music from piano playing (dictation)		
Transcribing music from recording		
Singing / playing tasks	Fly Me to the Moon,	Fly Me to the Moon, bass

on piano	bass and theme, chord voicing	and theme, chord voicing
Improvising on the piano alone	Fly Me to the Moon, bass and theme	
Improvising on piano with peers	Fly Me to the Moon, bass and theme	
Play-along (or sing-along) with recordings and score	Fly Me to the Moon, bass and theme	

Tasks and Activities BAROQUE:	Late Improvisation Group Lesson 3	Early Improvisation Group Lesson 3
Recognizing music by listening / singing and playing back		Handel: Sarabande Bass variations
Analysing score by singing and playing	Pachelbel: Canon suspensions, passing 8 7	Handel: Sarabande Bass variations
Recognizing / analyzing score by reading silently		Handel: Sarabande Bass variations
Transcribing music from piano playing (dictation)	Pachelbel: Canon suspensions, passing 8 7	
Transcribing music from recording		
Singing / playing tasks on piano	Pachelbel: chord voicing with 6, sus, passing 8 7	Pachelbel: chord voicing with 6, sus, passing 8 7
Improvising on the piano alone	Pachelbel: Canon	
Improvising on piano with peers	Pachelbel: Canon	

Play-along (or sing-along) with recordings and score		
JAZZ:	Lesson 3	Lesson 3
Recognizing music by listening / singing and playing back		
Analysing score by singing and playing		
Recognizing / analysing score by reading silently		
Transcribing music from piano playing (dictation)	Chord accompaniment rhythm in swing	Walking bass, rhythm in swing
Transcribing music from recording	Chord accompaniment rhythm in swing	
Singing / playing tasks on piano	Fly Me to the Moon with 3-7 voicing: all positions	Fly Me to the Moon with 3-7 voicing, walking bass
Improvising on the piano alone	Variations: Fly Me to the Moon chord progression	
Improvising on piano with peers	Fly Me to the Moon chord progression and theme	
Play-along (or sing-along) with recordings and score	Fly Me to the Moon chord progression and theme	Fly Me to the Moon chord progression and theme

Tasks and Activities BAROQUE:	Late Improvisation Group Lesson 4	Early Improvisation Group Lesson 4
Recognizing music by listening / singing and playing back		Spanish Foglia versions: Lully, Marais, Chords, ornaments

Analysing score by singing and playing		Handel: Sarabande: bass, walking bass
Recognizing / analyzing score by reading silently		Handel: Sarabande: bass, Walking bass
Transcribing music from piano playing (dictation)		Foglia melody variations
Transcribing music from recording		Foglia chord and melody variations
Singing / playing tasks on piano		Foglia
Improvising on the piano alone		
Improvising on piano with peers		
Play-along (or sing-along) with recordings and score		
JAZZ:	Lesson 4	Lesson 4
Recognizing music by listening / singing and playing back	Different rhythmical and chord accompaniments of Fly Me to the Moon, II-V-I	chord accompaniments of Fly Me to the Moon. II-V-I with 7, 9 voicing
Analysing score by singing and playing	Walking bass	II-V-I with 7, 9 and various voicing
Recognizing / analyzing score by reading silently		II-V-I with 7, 9 and various voicing
Transcribing music from piano playing (dictation)	II-V-I with 7, 9 and various voicing	II-V-I with 7, 9 and various voicing

Transcribing music from recording		
Singing / playing tasks on piano	Fly Me to the M: various voicing, walking bass	Cycle of Fifth and II-V-I voicing
Improvising on the piano alone	Fly Me to the Moon, Autumn Leaves	
Improvising on piano with peers	Fly Me to the Moon, Autumn Leaves	
Play-along (or sing-along) with recordings and score	Various accompaniments of Fly Me to the Moon, Autumn Leaves	Cycle of Fifth and II-V-I with 7, 9 and various voicing

Tasks and Activities BAROQUE:	Late Improvisation Group Lesson 5	Early Improvisation Group Lesson 5
Recognizing music by listening / singing and playing back	Spanish Foglia versions: Lully, Marais, Chords, ornaments	Spanish Foglia versions: C. Ph. E. Bach, ornaments, rhythmical variations
Analysing score by singing and playing	Handel: Sarabande: bass	Spanish Foglia versions: C. Ph. E. Bach
Recognizing / analyzing score by reading silently	Comparison: Foglia and Handel: Sarabande	
Transcribing music from piano playing (dictation)	Foglia melody variations	Foglia melody variations, ornaments
Transcribing music from recording	Foglia chords and bass variations	
Singing / playing tasks on piano	Foglia chord progression	
Improvising on the piano alone		

Improvising on piano with peers	Foglia chord progression (also in free-style)	
Play-along (or sing-along) with recordings and score		
JAZZ:	Lesson 5	Lesson 5
Recognizing music by listening / singing and playing back		Cycle of Fifth with 7 and 9 in various voicing, II-V-I
Analysing score by singing and playing		
Recognizing / analyzing score by reading silently		
Transcribing music from piano playing (dictation)		Cycle of Fifth with 7 and 9 in various voicing, II-V-I
Transcribing music from recording		
Singing / playing tasks on piano		Fly Me to the M: various voicing, walking bass
Improvising on the piano alone		
Improvising on piano with peers		
Play-along (or sing-along) with recordings and score		Accompaniments of Fly Me to the Moon, Autumn Leaves, Cycle of Fifth

Tasks and Activities BAROQUE:	Late Improvisation Group Lesson 6	Early Improvisation Group Lesson 6
Recognizing music by listening / singing and playing back		
Analysing score by singing and playing		
Recognizing / analyzing score by reading silently		
Transcribing music from piano playing (dictation)	Marin Marais' Foglia variations, ornaments	Corelli: Foglia variations
Transcribing music from recording		
Singing / playing tasks on piano	Handel: Sarabande: bass- walking bass connection	
Improvising on the piano alone	Foglia chord progression, melody and bass	
Improvising on piano with peers	Foglia chord progression, melody and bass	8
Play-along (or sing-along) with recordings and score	Foglia chord progression, melody and bass	
JAZZ:	Lesson 6	Lesson 6
Recognizing music by listening / singing and playing back	II-V-I colourations : 6, 9, 13 in Major and minor	II-V-I colourations : 6, 9, 13 in Major and minor, Take the A Train

Analysing score by singing and playing	II-V-I colourations of Autumn Leaves	II-V-I colourations 6, 9, 13 Take the A Train,
Recognizing / analyzing score by reading silently	Take the A Train, chords, theme	Take the A Train, chords, theme
Transcribing music from piano playing (dictation)		Walking bass
Transcribing music from recording		
Singing / playing tasks on piano	Walking bass - connected to baroque, Cycle of Fifth	Take the A Train, Cycle of Fifth, transposing II-V-I
Improvising on the piano alone	Walking bass, Cycle of Fifth	
Improvising on piano with peers	Walking bass - connected to baroque, Cycle of Fifth	
Play-along (or sing-along) with recordings and score		Take the A Train, chords, theme, Cycle of Fifth, II-V-I, bass

Tasks and Activities BAROQUE:	Late Improvisation Group Lesson 7	Early Improvisation Group Lesson 7
Recognizing music by listening / singing and playing back		
Analysing score by singing and playing	Foglia variations from Corelli	Figured bass, C. Ph. E. Bach Foglia variations

Recognizing / analyzing score by reading silently		Figured bass, C. Ph. E. Bach Foglia variations
Transcribing music from piano playing (dictation)	Foglia variation from Corelli	Foglia variation from Scarlatti
Transcribing music from recording		Foglia variation from Scarlatti
Singing / playing tasks on piano		
Improvising on the piano alone		
Improvising on piano with peers		
Play-along (or sing-along) with recordings and score		
JAZZ:	Lesson 7	Lesson 7
Recognizing music by listening / singing and playing back	II-V-I colourations : 6, 9, 13 in Major and minor, Take the A train	Take the A train, Beautiful Love, chords, bass, various chords
Analysing score by singing and playing	II-V-I colourations : 6, 9, 13, Take the A train	Beautiful Love, II-V-I colourations : 6, 9,
Recognizing / analyzing score by reading silently	II-V-I colourations : 6, 9, 13, Autumn Leaves	II-V-I colourations : 6, 9,
Transcribing music from piano playing (dictation)	Jazz pattern on II-V-I. Cycle of fifth, II-I-V	Jazz pattern on II-V-I. Cycle of fifth, II-I-V, chords
Transcribing music from recording	Jazz pattern on II-V-I Ella Fitzgerald	Jazz pattern on II-V-I
Singing / playing tasks	II-V-I colourations : 6, 9,	Beautiful Love, walking

on piano	13, Autumn Leaves	bass variants
Improvising on the piano alone		
Improvising on piano with peers	Take the A train, walking bass	
Play-along (or sing-along) with recordings and score	Autumn Leaves, walking bass, Take the A train	Beautiful Love, Take the A train

Tasks and Activities BAROQUE:	Late Improvisation Group Lesson 8	Early Improvisation Group Lesson 8
Recognizing music by listening / singing and playing back	Foglia variations from Corelli figured bass	
Analysing score by singing and playing		Handel: Gavotte: theme, variations
Recognizing / analyzing score by reading silently		Handel: Gavotte: theme, variations, figured bass
Transcribing music from piano playing (dictation)	Foglia variation from Scarlatti	
Transcribing music from recording		Jazz pattern on II-V-I Ella Fitzgerald
Singing / playing tasks on piano		
Improvising on the piano alone		

Improvising on piano with peers		
Play-along (or sing-along) with recordings and score		
JAZZ:	Lesson 8	Lesson 8
Recognizing music by listening / singing and playing back	Beautiful Love, II-V-I Take the A train	II-V-I colourations : 6, 9, 13 inversion of chords, voicing
Analysing score by singing and playing	Beautiful Love, II-V-I	Take the A train, Beautiful Love, II-V-I, chords
Recognizing / analyzing score by reading silently	Beautiful Love, II-V-I	
Transcribing music from piano playing (dictation)	Jazz patterns	Jazz patterns, various chords, voicing
Transcribing music from recording		
Singing / playing tasks on piano	Take the A Train, chords & bass of Beautiful Love	Beautiful Love, walking bass variants, II-V-I
Improvising on the piano alone		
Improvising on piano with peers	II-V-I in Major, Take the A train	
Play-along (or sing-along) with recordings and score		Cycle of Fifth accompaniment, walking bass

Tasks and Activities BAROQUE:	Late Improvisation Group Lesson 9	Early Improvisation Group Lesson 9
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Recognizing music by listening / singing and playing back		Handel: Gavotte: theme, variations
Analysing score by singing and playing	Handel: Gavotte: theme, variations	Handel: Gavotte: theme, variations
Recognizing / analyzing score by reading silently	Handel: Gavotte: theme, variations, figured bass	Handel: Gavotte: theme, variations, figured bass
Transcribing music from piano playing (dictation)	variations of Handel: Gavotte, figured bass	variations of Handel: Gavotte, figured bass
Transcribing music from recording		
Singing / playing tasks on piano		Handel: Gavotte: theme, variations
Improvising on the piano alone		
Improvising on piano with peers		
Play-along (or sing-along) with recordings and score		
JAZZ:	Lesson 9	Lesson 9
Recognizing music by listening / singing and playing back	II-V-I in Major and minor, colourations, single chords	Summary, practicing of recognizing chords, chord progressions, voicing
Analysing score by singing and playing		
Recognizing / analyzing score by reading silently		

Transcribing music from piano playing (dictation)		II-V-I chord progressions and patterns
Transcribing music from recording	Ch. Parker's solo on II-V-I	Ch. Parker's solo on II-V-I
Singing / playing tasks on piano	Beautiful Love chords and theme	Take the A Train, II-V-I, Beautiful Love
Improvising on the piano alone		
Improvising on piano with peers	Melody variations of Beautiful Love	
Play-along (or sing-along) with recordings and score		

Tasks and Activities BAROQUE:	Late Improvisation Group Lesson 10
Recognizing music by listening / singing and playing back	Summary, practicing of recognizing chords, chord progressions
Analysing score by singing and playing	
Recognizing / analyzing score by reading silently	
Transcribing music from piano playing (dictation)	Folia and Handel: Sarabande variations
Transcribing music from recording	
Singing / playing tasks on piano	

Improvising on the piano alone	Foglia variations and d: i-V-VI-V "test-task"
Improvising on piano with peers	Foglia variations and d: i-V-VI-V "test-task"
Play-along (or sing-along) with recordings and score	Foglia versions
JAZZ:	Lesson 10
Recognizing music by listening / singing and playing back	Summary, practicing of recognizing chords, chord progressions,
Analysing score by singing and playing	
Recognizing / analyzing score by reading silently	
Transcribing music from piano playing (dictation)	II-V-I chord progressions and patterns
Transcribing music from recording	
Singing / playing tasks on piano	Take the A Train, II-V-I
Improvising on the piano alone	Take the A Train, II-V-I
Improvising on piano with peers	Take the A Train, II-V-I
Play-along (or sing-along) with recordings and score	Take the A Train, II-V-I

Study Two:

Handouts of musical examples, what were different from Study One (scores, supplementary music theory material, chord summaries)

Passacaglia in g minor
Theme reduction from Suite No. 7 HWV 432

G. F. Händel

The first system of the musical score consists of two staves. The upper staff is in treble clef and the lower staff is in bass clef. Both are in G minor (two flats) and 4/4 time. The upper staff features a sequence of chords: G minor, A minor, Bb minor, and C minor, each followed by a dotted quarter note. The lower staff provides harmonic support with chords: G minor, A minor, Bb minor, and C minor, each followed by a dotted quarter note.

The second system of the musical score consists of two staves. The upper staff is in treble clef and the lower staff is in bass clef. Both are in G minor (two flats) and 4/4 time. The upper staff features a sequence of chords: G minor, A minor, Bb minor, and C minor, each followed by a dotted quarter note. The lower staff provides harmonic support with chords: G minor, A minor, Bb minor, and C minor, each followed by a dotted quarter note.

Variation 1 (reduction)

The first system of the musical score for Variation 1 (reduction) consists of two staves. The upper staff is in treble clef and the lower staff is in bass clef. Both are in G minor (two flats) and 4/4 time. The upper staff features a sequence of chords: G minor, A minor, Bb minor, and C minor, each followed by a dotted quarter note. The lower staff provides harmonic support with chords: G minor, A minor, Bb minor, and C minor, each followed by a dotted quarter note.

The second system of the musical score for Variation 1 (reduction) consists of two staves. The upper staff is in treble clef and the lower staff is in bass clef. Both are in G minor (two flats) and 4/4 time. The upper staff features a sequence of chords: G minor, A minor, Bb minor, and C minor, each followed by a dotted quarter note. The lower staff provides harmonic support with chords: G minor, A minor, Bb minor, and C minor, each followed by a dotted quarter note.

Variation 3 (reduction)

First system of Variation 3 (reduction). The music is in 4/4 time with a key signature of two flats (B-flat and E-flat). The right hand plays a sequence of eighth notes: B-flat, C, D, E-flat, F, G, A, B-flat. The left hand plays a sequence of quarter notes: B-flat, C, D, E-flat.

Second system of Variation 3 (reduction). The right hand continues with eighth notes: C, D, E-flat, F, G, A, B-flat, C. The left hand continues with quarter notes: C, D, E-flat, F. A fermata is placed over the final measure of the right hand.

Variation 4

First system of Variation 4. The right hand plays a sequence of quarter notes: B-flat, C, D, E-flat. The left hand plays a sequence of eighth notes: B-flat, C, D, E-flat, F, G, A, B-flat.

Second system of Variation 4. The right hand continues with quarter notes: C, D, E-flat, F. The left hand continues with eighth notes: C, D, E-flat, F, G, A, B-flat, C. A fermata is placed over the final measure of the right hand.

Variation 5 (reduction)

First system of Variation 5 (reduction). The right hand plays a sequence of eighth notes with triplets: B-flat, C, D, E-flat, F, G, A, B-flat. The left hand plays a sequence of quarter notes: B-flat, C, D, E-flat.

Second system of Variation 5 (reduction). The right hand continues with eighth notes with triplets: C, D, E-flat, F, G, A, B-flat, C. The left hand continues with quarter notes: C, D, E-flat, F. A fermata is placed over the final measure of the right hand.

Dido and Aeneas, Act III. Aria Passacaglia. Z 626

Aria - Passacaglia
from Purcell - Dido and Aeneas
Act II

Soprano

Keyboard (orch.)

Bass ostinato

52

When I am

7

laid, am laid in earth, may my wrongs cre - ate no

12

trou - ble, no trou - ble in thy breast,

g: i

V_5^6 $I_4^{2\sharp}$ IV_4^6 iv^6 V_7^\sharp i^6 ii_5^6 i_4^6 V_7^\sharp i VI^6

vii_7^\sharp V_7^\sharp v^6 vi_4^7 IV_4^6 iv^6 V_7^\sharp i^6 ii_5^6 V_7^\sharp i

Suite in D minor, HWV 448

Theme of Chaconne in d minor

G. F. Handel

Variation II from Chaconne in d minor

G. F. Handel

Musical score for Variation II from Chaconne in d minor by G. F. Handel. The score is in 3/4 time and d minor. It consists of two systems of music. The first system has four measures, and the second system has four measures starting with a measure rest (5).

Jazz walking bass line based on the jazz standard 'Fly Me to the Moon'

Jazz walking bass line for 'Fly Me to the Moon' in 4/4 time and d minor. The score shows two lines of music with chord symbols above each measure.

Chord symbols: Dm7, Gm7, C7, FMaj7, B^bMaj7, Em7/^b5, A7, Dm7.

The Messiah, No.6. Chorus

Handel

13

Soprano: [rest]

Alto: and He shall pu-ri -fy

Tenor: (sons)

Bass: of

Orch. g: IV⁷ VII⁷ III⁷ VI⁷

15

Alto: and He shall pu-ri -fy

Tenor: the sons

Bass: Le - vi,

Orch. II⁷ V⁷ V⁶ I

2

E with added 9th extended to five voices

57

Cm7/9 F7/9 B^bMaj7/9 E^bMaj7/9 A^øb9 D7/9 Gm7/9

65 in inversions

Cm7/9 F7/9 B^bMaj7/9 E^bMaj7/9 A^øb9 D7/9 Gm7/9

F with added 9th and 13th

73

Cm7/9 F7/9/13 B^bMaj7/9 E^bMaj7/9/13 A^øb9 D7/^b9/^b13 Gm7/9 GmMaj7/9

81 in inversions

Cm7/9 F7/9/13 B^bMaj7/9 E^bMaj7/9/13 A^øb9 D7/^b9/^b13 Gm7/9 GmMaj7/9

G with other kinds of color tones

89

Cm7/9 F7/9/13 B^b6/9 E^b6/9 A^øsus D7/^b9/[#]9/^b13 Gm6/9 GmMaj7/9

in inversions

97

Cm7/9 F7/9/13 B^b6/9 E^b6/9 A^øsus D7/^b10 Gm6/9 GmMaj7/9

APPENDIX H

Study Two: Evaluation form for Improvisation tests of Early Improvisation Group

Evaluation form of audio recordings of students' improvisation

This evaluation form supports a study that was conducted as a part of a PhD research at the Music Department of University of Jyväskylä during the autumn academic semester of 2011. The research gathered data through a baroque and jazz harmony course.

Altogether 20 audio files were made⁵⁶ of students' improvisation in baroque and jazz styles on: 10 Pre-test improvisation tasks at the beginning of the course and 10 Post-test improvisation task at the end of the course. The main theme of improvisation was the Dm and C chords in both styles. Students were not prepared for this tasks at the Pre-test improvisation. The aim of this study is to find possible developments between the students' pre- and post-test improvisation. Please rate the anonymous 20 audio files attached in a random order on the 1-7 degree scale according to the following criteria: 1. Musicality in general, 2. Originality, 3. Stylistic awareness of rhythm and form, 4. Stylistic awareness of melody phrasing and embellishment. In the scale the figure 1 means the lowest, the 7 means the highest rate in the quality of improvisation. Please write the numbers into the table. Thank you.

Baroque:

Audio file code	Musicality in general	Originality	Stylistic awareness of rhythm & form	Stylistic awareness of melody phrasing & embellishment
Day_01_05				
Day_01_07				

⁴⁶ Originally five students were at the Early IG during the first part of the course. One of them could not participated in the second half of the course therefore she was omitted from the data analysis, see paragraph 5.3.1 Participants.

Day_01_09				
Day_04_01				
Day_05_01				
20111212_01				
20111212_03				
20111212_05				
20111212_07				
20111212_09				

Jazz:

Audio file code	Musicality in general	Originality	Stylistic awareness of rhythm & form	Stylistic awareness of melody phrasing & embellishment
Day_01_06				

Day_01_08				
Day_01_10				
Day_04_02				
Day_05_02				
20111212_02				
20111212_04				
20111212_06				
20111212_08				
20111212_10				

Thank you for evaluation to support my research!

Monika Benedek
Music Department,
University of Jyväskylä

Evaluation form for Improvisation tests of Late Improvisation Group

Evaluation form of audio recordings of students' piano improvisation

This evaluation form supports a study that was conducted as a part of a PhD research at the Music Department of University of Jyväskylä during the spring academic semester of 2012. The research gathered data through a baroque and jazz harmony course.

Altogether 40 short audio files were made of 5 students' piano improvisation, in baroque and jazz styles. The files are less than one minute long. Every student had 4 Pre-test-improvisation tasks (at the beginning of the course) and 4 Post-test-improvisation tasks (at the end of the course): 2 in baroque-classical and 2 in jazz-pop styles. Students were not prepared for this tasks at the Pre-test-improvisation. The aim of this study is to find possible developments between the students' pre- and post-test-improvisation.

Please rate the anonymous 40 audio files attached in a random order on the 1-7 degree scale according to the following criteria: 1. Musicality in general, 2. Originality, 3. Stylistic awareness of rhythm and form, 4. Stylistic awareness of melody phrasing and embellishment. In the scale the figure 1 means the lowest, the 7 means the highest rate. Please write the numbers into the table. Thank you.

Baroque:

Task 1: Students improvised a melody (with 1 hand) on the chord progression: **Dm A Bflat A** accompanied by the teacher in chaconne-style.

Audio file code	Musicality in general	Originality	Stylistic awareness of rhythm & form	Stylistic awareness of melody phrasing & embellishment
20120131 LP 018_1				
20120131 LP 025				
20120131 LP 032				
20120214 LP 41				

20120214 LP 49				
20120418_2				
20120424_2				
20120424_8				
20120424_16				
20120424_23				

Baroque:

Task 2: Students improvised alone (with 2 hands) on the chord progression:
Dm A Bflat A

Audio file code	Musicality in general	Originality	Stylistic awareness of rhythm & form	Stylistic awareness of melody phrasing & embellishment
20120131 LP 018_2				
20120131 LP 026				
20120131 LP 033				

20120214 LP 42				
20120214 LP 51				
20120418_3				
20120424_3				
20120424_9				
20120424_17				
20120424_25				

Jazz:

Task 1: Students improvised a melody (with 1 hand) on the chord progression:
Dm7 G7 CMaj7 accompanied by the teacher in swing style.

Audio file code	Musicality in general	Originality	Stylistic awareness of rhythm & form	Stylistic awareness of melody phrasing & embellishment
20120131 LP 021				
20120131 LP 029				

20120131 LP 035				
20120214 LP 44				
20120214 LP 53				
20120418_5				
20120424_5				
20120424_12				
20120424_19				
20120424_27				

Jazz:

Task 2: Students improvised alone (with 2 hands) on the chord progression:
Dm7 G7 CMaj7

Audio file code	Musicality in general	Originality	Stylistic awareness of rhythm & form	Stylistic awareness of melody phrasing & embellishment
20120131 LP 022				

20120131 LP 030				
20120131 LP 036				
20120214 LP 46				
20120214 LP 55				
20120418_6				
20120424_6				
20120424_14				
20120424_20				
20120424_28				

Thank you for your evaluation to support my research!

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