EXPLORING COLLABORATIVE PIANIST'S PERCEPTIONS ON BENEFITS OF ACQUIRING CONDUCTING SKILLS IN GUANGDONG, CHINA

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KUALA LUMPUR

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EXPLORING COLLABORATIVE PIANIST'S PERCEPTIONS ON BENEFITS OF ACQUIRING CONDUCTING SKILLS IN GUANGDONG, CHINA

ABSTRACT

This study explores collaborative pianists' perceptions of the benefits of acquiring conducting skills, focusing on three areas: auditory discrimination, orchestration, and interpersonal skills. Grounded in a conceptual framework that integrates theories of skill transfer and professional development in music, it examines how conducting training enhances technical, analytical, and social competencies in collaborative pianists. This study employs qualitative methods, combining thematic analysis of semi-structured interviews with professional pianists and content analysis of relevant literature. The findings reveal that auditory discrimination, enhanced through conducting training, helps pianists address complex musical issues such as intonation, balance, and timbre. Orchestration skills, rooted in advanced musical analysis, were found to enrich pianists' artistic interpretation and decision-making in ensemble settings. Additionally, the study highlights the importance of interpersonal skills, such as leadership, teamwork, and empathy, which conducting training fosters and which are crucial for effective collaboration. This research highlights the interdisciplinary value of conducting skills in collaborative piano practice and their potential to foster professional development.

Keywords: Collaborative Pianists, Conducting Skills, Auditory Discrimination, Orchestration, Interpersonal Skills.

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MENEROKA PERSEPSI PIANIS KOLABORATIF TERHADAP MANFAAT MEMPELAJARI KEMAHIRAN KONDUKSI DI GUANGDONG, CHINA

ABSTRAK

Kajian ini membincangkan persepsi pianis kolaboratif terhadap manfaat menguasai kemahiran konduksi, dengan memberi tumpuan kepada tiga aspek utama: diskriminasi auditori, orkestrasi, dan kemahiran interpersonal. Berdasarkan kerangka konsep yang mengintegrasikan teori pemindahan kemahiran dan pembangunan dalam muzik, kajian ini mengkaji latihan konduktor dapat meningkatkan kecekapan teknikal, analitikal, dan sosial dalam kalangan pemain piano kolaboratif. Kajian ini menggunakan kaedah kualitatif dengan menggabungkan analisis tematik terhadap temu bual separa berstruktur bersama dengan pemain piano yang profesional dan analisis kandungan sastera yang relevan. Penemuan kajian ini menunjukkan bahawa keupayaan diskriminasi pendengaran, yang dipertingkatkan melalui latihan konduktor. Kaedah ini telah membantu pemain piano menangani isu yang kompleks seperti intonasi, keseimbangan, dan warna bunyi. Kemahiran orkestrasi berasaskan analisis muzik yang mendalam didapati memperkayakan interpretasi artistik dan penentuan keputusan pemain piano dalam bentuk ensembel. Selain itu, kajian ini menekankan kepentingan kemahiran hubungan antara satu sama lain seperti kepimpinan, kerja berpasukan, dan empati, yang dipupuk melalui latihan konduktor dan kemahiran ini amat penting dalam kerjasama yang berkesan. Penyelidikan ini menegaskan nilai interdisiplin kemahiran konduktor dalam amalan piano kolaboratif dan potensinya untuk memupuk pembangunan yang profesional.

Kata Kunci: Pianis Kolaboratif, Kemahiran Konduksi, Diskriminasi Auditori, Orkestrasi, Kemahiran Interpersonal.

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Thank you all for being part of this academic journey.

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CHAPTER 1

INTRODUCTION

1.1 Introduction and Background

1.1.1 Introduction and Background of Collaborative Piano

Collaborative piano refers to the art of piano cooperating with vocal music, instrumental music and other art forms, emphasizing the equality and importance of piano in cooperation (Jia & Roongruang, 2022). Collaborative piano is a comprehensive art, a synthesis of time and space, a synthesis of hearing, vision, perception and kinesthetic, a synthesis of imagination, thinking and creation, and a synthesis of knowledge, skills and qualities (Dongmei & Binqi, 2021). A good collaborative pianist should not only play the piano well, but more importantly, be able to coordinate and cooperate with various parts (Liu, 2013). Especially when the pianist plays orchestral music, it not only performs the melodies but also acts as the conductor, simulating the different sections of the orchestra to create a complete symphonic experience for the audience (Jia & Roongruang, 2022).

The role of the piano as an accompanist emerged in the 17th century, and discussions surrounding this responsibility are longstanding (Browning, 2022). Notably, Karl Philip Emanuel Bach dedicated 41% of his treatise, *The True Art of Playing Keyboard Instruments*, to this topic, while Quantz allocated 26% of *On Playing the Flute* to the same issue (Browning, 2022). During the Baroque period, basso continuo was commonly employed to provide harmonic support, and Johann Sebastian Bach played a significant role in integrating keyboard accompaniment into his compositions, primarily for violin and flute (Seuteu, 2021). In Beethoven's duet sonata for piano and violin, since the piano part is composed for himself, the relationship between piano and violin tends to be equal (Seuteu, 2021). During the Romantic period, as composers such

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as Franz Liszt, Robert Schumann, and Johannes Brahms created a large number of charismatic and deeply expressed lyrical songs, the role of the accompanist increased again, transcending its traditional functions of providing rhythm and harmonic support (Seuteu, 2021).

However, the term accompanist has come across to many as derogatory, contemptuous, and lacking in self-esteem (Katz, 2009). In the early 1990s, the famous American pianist Samuel Sanders proposed the concept of "collaborative piano" to emphasize the equal status and artistic influence of collaborative pianists and other instruments and singers (Jia & Roongruang, 2022). The reason for using the word collaborative instead of accompaniment is that accompaniment can no longer fully reflect the equal relationship in musical collaboration (Jia & Roongruang, 2022). The word "collaborate" derives from the Latin word for "*collaborare*," c*ol* meaning "with" and *laborare* meaning "to work," so "collaborate" means to work together and contains a larger meaning than the word "accompany" (Lee, 2016).

In their study, King and Roussou (2017) examined the perspectives of seven experienced collaborative pianists and seven instrumental soloists. The soloists characterized the collaborative pianist as 'playing with them' rather than 'playing for them,' with one soloist referring to the collaborative pianist as their 'other half.' The repeated use of term such as "collaboration," "connection," "interaction," "flexibility," "trust," and "understanding" reflects a sense of equality in this relationship. The general perception of collaborative pianists among modern music practitioners is changing.

As a music subject, collaborative piano is taught at a higher level in most universities in the United States and Europe. In China, collaborative piano started late and developed slowly, with the musical form of piano accompaniment emerging only at the beginning of the 20th century; many conservatories have since begun to establish piano accompaniment as part of their curriculum (Jia & Roongruang, 2022). The lack of

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incorporation of collaborative piano in Chinese universities (Yu, 2017) persisted until the term began to gain widespread acceptance following the 'First CCOM (Central Conservatory of Music) Collaborative Piano Art Festival' in 2014, which gradually led to its replacement of 'piano accompaniment' (Jia & Roongruang, 2022).

Although 'collaborative piano' is now widely accepted in the music industry, many music schools continue to use the original terminology, resulting in various terms such as 'piano accompaniment', 'accompaniment collaborative art (collaborative art)', 'chamber/instrumental collaborations', 'piano art direction', 'vocal coaching', and 'ensemble arts' still being employed (Jia & Roongruang, 2022). In this study, the term "collaborative piano" will be used to refer to all performing arts in which pianos collaborate with vocal, instrumental, and other art forms.

1.1.2 Introduction of Conducting Skills

According to the NASM (National Association of Schools of Music) handbook (2022-23), a conductor requires a comprehensive range of musical skills, including musicianship, instrumental competence, vocal competence, analysis, and repertoire, while also demonstrating sufficient interpersonal skills.

Conductors require advanced aural skills to deal with complex issues such as intonation, balance, and color, as well as advanced skills in sight-reading and transposition, especially for preparing scores for performance (NASM, 2022, p. 181). The conductor's ear should be keen enough to recognize inaccuracy in pitch and to maintain the proper balance (Rudolf, 1995). A substantial part of a conductor's undergraduate training is devoted to developing auditory and visual discrimination, including ear training and solfeggio and music score reading (Costanza, 1971).

Orchestral and wind conductors must have mastery of at least one instrument, and detailed knowledge of all instruments used in orchestral or wind performance. Functional keyboard skills are essential for all conductors; and knowledge of string

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techniques is essential for orchestral conductors (NASM, 2022, p.181). Advanced skills in musical analysis based on competence in counterpoint, harmony, composition, orchestration, and the ability to integrate analytical knowledge and skills in the development of artistic interpretations and the preparation of scores for performance (NASM, 2022, p.181). The importance of knowing the orchestration thoroughly cannot be overstated, not only for cuing but for the conductor's planning as well (Rudolf, 1995).

Conductors need to have sufficient interpersonal skills to be able to deal effectively with musicians and factors such as management, unions, contracts, professional ethics, audiences, repertoire, teaching institutions, and public relations (NASM, 2022, p. 190). When a conductor knows how to work with people in a group, it is valuable for effective rehearsals and for motivating musicians to play good performances (Rudolf, 1995). Contemporary musicians possess a strong sense of self; they are not only aware of the respect they receive from others but are also eager to express their individuality (Chuang, 2005). Thus, in contrast to the harsh and demanding style of the early years, some famous conductors, such as Herbert von Karajan, were very respectful of the members of the orchestra (Chuang, 2005).

1.1.3 Introduction and Background of the Study

Music education in normal universities in China pays attention to cultivating application-oriented talents, and all undergraduate students need to participate in conducting training (Wei, 2023). According to the *Training Program of the School of Music at South China Normal University* (2019), Piano and Choral Conducting are core required courses for all students, while Collaborative Piano is a mandatory course for those who choose the direction of collaborative piano.

On October 15, 2020, the General Office of the CPC Central Committee and the General Office of the State Council issued the *Opinions on Comprehensively*

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Strengthening and Improving School Aesthetic Education in the New Era. This document emphasizes the importance of stimulating students' artistic interests and innovative consciousness during the compulsory education stage, cultivating their healthy aesthetic tastes and styles, and assisting them in mastering one or two artistic specialties. In the context of educational reform, Chinese schools are gradually shifting from an exam-oriented approach to a quality-oriented model, resulting in an increasingly elevated status for aesthetic education within the school curriculum. Consequently, primary and secondary schools are actively establishing student orchestras, which effectively enhance the impact of aesthetic education and improve students' overall artistic quality in music (Junhao et al., 2023).

This also establishes higher standards for the quality of music teachers. Sun and Leung (2014) found in their study on music education in primary schools in China that music teaching has imposed new demands on teachers across various professional domains, including choral conducting and the organization of extracurricular activities such as choirs and orchestras. Most music students majoring in collaborative piano, in addition to their regular music classroom teaching, are also required to organize and conduct an orchestra or choir in their teaching after graduation (Chen, 2015). This has given them experience in conducting.

This study focused on collaborative pianists, some of whom had acquired conducting experience through their learning and working environments, including the study of orchestration theories and participation in orchestra and choir rehearsals. Grounded in a conceptual framework that integrated theories of skill transfer and professional development in music, the study examined how conducting skills intersected with and enhanced collaborative piano practice. Employing in-depth semi-structured interviews and thematic analysis with five collaborative pianists, this research aimed to gain a comprehensive understanding of their perceptions and experiences.

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Simultaneously, a content analysis of the literature was conducted to verify the hypothesis that conducting skills are beneficial to collaborative piano, with the findings from interviews compared against literature to strengthen the persuasiveness and credibility of the results. By investigating the potential relationship between collaborative piano and conducting, this study provided new perspectives and ideas for collaborative piano performance and education.

1.2 Problem Statements

1.2.1 The Topic and Research Problem

The aim of this study was to explore collaborative pianists' perceptions of acquiring conducting skills and the potential benefits of these skills to their performance and musical understanding. This study will focus on exploring what additional benefits collaborative pianists can gain from learning conducting skills in their practice and contribute to their own collaborative piano performance.

The research problem of this study is to explore how collaborative pianists perceive the value and impact of these skills in their performance, cooperation and professional development after learning conducting skills. This involves the collaborative pianist's specific perception of these skills, the effects in practical application, and the potential benefits of these skills to their career.

1.2.2 Justification of the Importance of the Problem

Xu Zhong, a conductor and pianist currently serving as the president of the Shanghai Opera House, stated in an interview on the art and popular science program *Art World*, produced by CCTV, that 'the piano is the king of musical instruments'. He described the piano's ability to produce a wide range of sounds with rich and thick timbres, allowing it to imitate a variety of orchestral timbres simultaneously, capabilities not shared by other instruments. For him, piano and conducting are

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complementary pursuits that enhance one another. His transition from collaborative pianist to conductor has enabled him to better explore the realm of sound and has also facilitated his understanding of the technical needs associated with collaborative piano.

In China, most collaborative pianists acquire conducting skills in their learning and working environments, or they engage in conducting orchestras and choirs (Wei, 2023; Junhao et al., 2023; Chen, 2015). However, as far as we know, there is a lack of specific literature and research on the intersection of collaborative piano and conducting, but we can find some commonalities between them from the literature on collaborative piano and conducting respectively.

In collaborative roles, both collaborative pianist and conductor provide leadership and direction to the ensemble. Conductors oversee the entire ensemble (Oriola et al., 2023; Marotto et al., 2007), while collaborative pianists guide and shape the musical interpretation in their specific contexts (Jia & Roongruang, 2022; Roussou, 2013).

Both conductor and collaborative pianist require effective communication skills to engage with other musicians. Conductors convey musical nuances and instructions to the ensemble through gestures, eye contact, and facial expressions (King & Roussou, 2017; Lee, 2016), while collaborative pianists communicate with their partners by playing and adapting to the dynamics and diction of the performers they accompany (Van Zyl & Cupido, 2021; Kokotsaki, 2007).

In interpreting the score, both collaborative pianist and conductor bear the responsibility of conveying the composer's intentions. Conductors analyze and interpret the score, making decisions regarding rhythm, dynamics, and diction (Katz, 2009; Ulrich, 2009), while collaborative pianists interpret the score by adjusting their playing to complement the soloist or ensemble with which they are collaborating (Şuteu, 2021; Katz, 2009).

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Both collaborative pianist and conductor require a keen awareness of ensemble dynamics. They must actively listen to other musicians and adjust their performances to maintain balance and cohesion in the musical environment (Russell, 2015; Koivunen & Wennes, 2011; Geringer & Johnson, 2007).

Both conductor and collaborative pianist require a high degree of versatility. Conductors are capable of leading various types of ensembles, including orchestras, choirs, and chamber groups (Koivunen & Wennes, 2011), while collaborative pianists collaborate with a wide range of instrumentalists, vocalists, and ensembles (Jia & Roongruang, 2022; Kokotsaki, 2007).

1.2.3 Deficiencies in Existing Knowledge on Collaborative Piano

Currently, research on collaborative piano primarily focuses on several key aspects. First, in terms of role and importance, collaborative pianists play a crucial role in supporting and enhancing the musical performance of other musicians, requiring them to adeptly accompany a variety of instrumentalists and vocalists while understanding diverse musical genres (Van Zyl & Cupido, 2021; King & Roussou, 2017; Kokotsaki, 2007). Second, regarding skill training, collaborative pianists typically undergo specific training that includes dedicated courses and practical experience, equipping them with strong sight-reading skills and the ability to adapt to different performers and musical contexts (Şuteu, 2021; Braaksma, 2020; Silvey & Springer, 2020; Lee, 2019). Third, in collaborative partnerships, collaborative piano transcends traditional accompaniment by requiring pianists to engage interactively and dynamically within the group, participating in teaching and coaching while instructing musicians in interpretation, expression, and ensemble performance (Jia & Roongruang, 2022; Roussou, 2013; Myers & White, 2012). Additionally, the repertoire for collaborative piano is extensive, encompassing classical art songs, opera, and contemporary music,

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with different styles and genres requiring varying collaboration skills and rehearsal strategies (Savella, 2023; Sherer, 2022; Pow, 2016; Sugiyama, 2012). Finally, with advancements in technology, collaborative pianists increasingly utilize digital tools and resources for rehearsing and performing, including collaborative piano applications and virtual rehearsal and recording technologies (Liu, 2023; Corner, 2020; Barro et al., 2012; Xiao & Ishii, 2010).

As far as we know, the current study perspective on collaborative pianists is limited, and there is no literature on the perceptions and benefits of collaborative pianists on conducting skills.

1.2.4 The Audience That Will Benefit

For collaborative pianists, knowing what other pianists think about conducting skills can be a better way to assess whether the time and effort should be invested in learning them. The findings could help collaborative pianists understand how conducting skills can enhance their playing and collaboration abilities, thereby aiding their career development.

For music educators, the research results can help design or adjust the educational curriculum of collaborative piano and develop effective teaching methods to optimize teaching results.

For music scholars and researchers, this study will provide new perspectives and data support for academic research in the field of music education and collaborative piano, promote in-depth discussion of conducting skills and collaborative pianist development theories, and provide basic data for further empirical research to help understand the application and effects of conducting skills in real music environments.

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1.3 Research Objectives and Research Questions

This study explores the perceptions and benefits of collaborative pianists on conducting skills, and provides information for collaborative piano performance and teaching through individual semi-structured in-depth interviews with 5 participants and thematic analysis methods.

The research objectives guiding this study are:

1. To explore collaborative pianists' perceptions on benefits of acquiring auditory discrimination in conducting skills, specifically in dealing with complex issues such as intonation, balance, and color.

2. To investigate collaborative pianists' perceptions on benefits of acquiring orchestration in conducting skills, specifically focusing on advanced musical analysis and its integration into artistic interpretations, including arrangement and timbre management.

3. To find out collaborative pianists' perceptions on benefits of acquiring interpersonal skills in conducting skills, specifically focusing on leadership, teamwork, and empathy.

And the corresponding research questions guiding this study are:

1. What are collaborative pianists' perceptions on benefits of acquiring auditory discrimination in conducting skills, specifically in dealing with complex issues such as intonation, balance, and color?

2. What are collaborative pianists' perceptions on benefits of acquiring orchestration in conducting skills, specifically focusing on advanced musical analysis and its integration into artistic interpretations, including arrangement and timbre management?

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3. What are collaborative pianists' perceptions on the benefits of acquiring interpersonal skills in conducting skills, specifically focusing on leadership, teamwork, and empathy?

1.4 Significance of the Study

With the rapid development of music culture and the popularity of mass music activities in China, the form of piano accompaniment has been widely used. The transition from traditional piano accompaniment to collaborative piano represents a significant shift in perspective. Collaborative piano is a more complex and profundity discipline, which requires the active collaboration of pianist and their partner to achieve a high level of performance. Actively seeking the integration of Chinese collaborative piano with global practices will contribute to the advancement of Chinese musical art (Jia & Roongruang, 2022).

Although still in the initial stage of development, the piano accompaniment course has demonstrated a significant impact on piano students, resulting in a high demand for collaborative pianists. For instance, piano performers in symphony orchestras frequently undertake various responsibilities, as many musical works require appropriate piano accompaniment. Consequently, there has been a gradual emergence of numerous piano accompaniment teachers and students (Shi, 2018).

In the context of Chinese music education, most of collaborative pianists have learned the skills of conducting or conducting an orchestra or choir while studying and working (Junhao et al., 2023; Wei, 2023; Chen, 2015). This study will conduct semi-structured interviews with 5 collaborative pianists with conducting experience and skills to deeply understand their perceptions and experiences on conducting skills, and reveal the potential relationship between collaborative piano and conducting, with a view to

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providing new ideas for collaborative piano performance and education.

1.5 Delimitation of the Study

1.5.1 Participant Characteristics

This study focuses on collaborative pianists' perceptions on benefits of acquiring conducting skills. Therefore, the participants include collaborative pianists who possess conducting skills or experience. Theses collaborative pianists are musicians who majored in collaborative piano and are actively engaged in this field. Conducting skills or experience refers to musicians who have completed coursework in conducting and orchestration during their studies, or who have experience conducting an orchestra or choir.

Non-professionals and beginners in collaborative piano were excluded, as were collaborative pianists without conducting skills or experience.

1.5.2 Geographical Boundaries

Due to their specific educational and professional backgrounds in China, most of collaborative pianists possess conducting skills and experiences that significantly shape their perceptions of the benefits of these skills (Junhao et al., 2023; Wei, 2023; Chen, 2015). Interviews for this study were limited to collaborative pianists based in China or those who primarily work within the context of Chinese music. This focus allows for an in-depth exploration of the cultural and contextual factors specific to China.

1.5.3 Temporal Boundaries

The collaborative piano began in the 17th century, and the pianist appeared as an accompanist (Browning, 2022). But this as an accompanist gives the impression of being derogatory, contemptuous, and lacking in self-esteem (Katz, 2009). In the early 1990s, American pianist Samuel Sanders proposed the concept of "collaborative piano" to emphasize the equal status and artistic influence of collaborative pianists and other instruments and singers (Jia & Roongruang, 2022).

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This study focus on contemporary perceptions and benefits, reflecting the current perspectives and experiences of collaborative pianists in China. The literature for content analysis in this study was published in English-language journals over a 20-year period from 2003 to 2023, as well as commonly used textbooks for collaborative piano and conducting.

1.6 Conceptual Framework

This study aims to explore the perceptions of collaborative pianists regarding the benefits of acquiring conducting skills. To structure this investigation, a Conceptual Framework is presented, which defines and links the key concepts that are central to understanding how conducting skills may influence collaborative pianists' professional development. The framework is designed to provide a clear view of the variables under study and their interrelationships, guiding both data collection and analysis.

1.6.1 Introduction

The acquisition of conducting skills by collaborative pianists can significantly impact their musical expertise and performance. While conducting is traditionally associated with orchestral leadership, its integration into a collaborative pianist's skill set can influence their professional practice. The Conceptual Framework for this study is based on three core dimensions: auditory discrimination ability, advanced musical analysis, and interpersonal skills, explaining how conducting skills may benefit collaborative pianists, shaping their perceptions of the value these skills bring to their work.

This framework not only aids in understanding the relationships between these concepts but also helps to form the basis for examining how these skills are perceived and utilized by collaborative pianists.

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1.6.2 Key Concepts Defined

Auditory Discrimination Ability: Auditory discrimination refers to the ability to perceive and differentiate subtle variations in sound, such as pitch, tone, balance, and rhythm. For collaborative pianists, these skills are crucial for effective interaction with other musicians. Conducting training enhances the pianist's capacity to judge these auditory elements, enabling them to adjust their playing in response to changes in ensemble performance (Smith, 2015).

Orchestration (Advanced Musical Analysis): Conducting requires an in-depth understanding of musical structures, including orchestration, counterpoint, and harmony. Collaborative pianists who acquire conducting skills gain a deeper insight into these aspects of music, allowing them to interpret scores more effectively and offer more nuanced artistic direction during performances (Brown, 2018). This analytical ability is particularly beneficial when engaging in complex musical collaborations.

Interpersonal Skills: Conducting not only involves musical expertise but also the development of leadership, communication, and teamwork. For collaborative pianists, these interpersonal skills are crucial when coordinating rehearsals, managing group dynamics, and leading other musicians. Studies show that conducting skills can enhance a musician's capacity to communicate artistic intentions and build a cohesive, collaborative environment (Johnson & Lee, 2017).

1.6.3 Relationships Between Key Concepts

The Conceptual Framework suggests that the three dimensions aural discrimination ability, advanced musical analysis, and interpersonal skills are interconnected, and together they contribute to a collaborative pianist's overall ability to enhance their performance and professional relationships. The relationships between these dimensions are supported by existing research in music psychology and

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performance studies.

Auditory Discrimination Ability and Orchestration (Advanced Musical Analysis): Studies suggest that musicians who develop a heightened ability to distinguish subtle auditory elements (such as pitch, tone, and balance) also improve their analytical skills when interpreting musical works. According to Smith (2015), improved aural discrimination enhances a musician's ability to engage with the finer details of musical structure, such as harmony and counterpoint. This suggests that a pianist with refined auditory perception is likely to engage in more advanced musical analysis, allowing for deeper and more informed interpretations of complex scores.

Auditory Discrimination Ability and Interpersonal Skills: Research by Johnson and Lee (2017) indicated that a heightened sensitivity to sound can significantly improve a musician's communication with other performers. A pianist with well-developed aural discrimination is better equipped to assess the performance of other musicians and adjust accordingly during rehearsals and performances. This ability to finely tune their auditory feedback is crucial for effective collaboration, fostering leadership and teamwork in group settings.

Orchestration (Advanced Musical Analysis) and Interpersonal Skills: According to Brown (2018), musicians who possess advanced skills in music analysis are more capable of articulating complex musical ideas, which is essential for leadership in collaborative performances. This ability to analyze music in depth allows pianists to communicate artistic intentions more clearly to other musicians, leading to better coordination and understanding during rehearsals. As conducting requires clear communication of musical ideas, the capacity for advanced musical analysis is directly linked to improved interpersonal communication and leadership skills within the group.

Thus, each dimension influences the others, creating a dynamic and mutually reinforcing relationship. Aural discrimination not only aids in musical analysis but also

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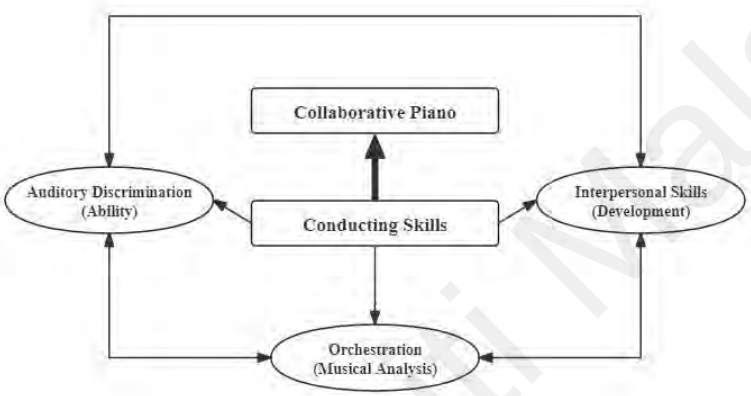
enhances the ability to communicate effectively with fellow musicians. Likewise, advanced analysis and musical interpretation lead to better interpersonal interactions, fostering a collaborative and harmonious ensemble environment.

1.6.4 Visual Representation of the Conceptual Framework

To provide a clearer understanding of the relationships between the key concepts, the Conceptual Framework can be represented visually as follows:

Figure 1.1

Conceptual Framework



1.7 Research Roadmap

To help readers better understand the structure of this research, a technical roadmap is provided in Figure 1.2, which is developed by drawing on the valuable insights from Burian et al.'s (2010) study *The Research Roadmap: A Primer To The Approach And Process*.

Burian et al.'s study provides a research roadmap that can be used to guide the completion of a research project or doctoral thesis, discusses research methods, ethical issues in research, key components, and provides a comprehensive chart that can be used as a guide to jumpstart research efforts. It aims to help researchers conduct research more systematically and efficiently, ensuring that all aspects of research are carried out with care and integrity, and in accordance with the ethical standards of

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scientific research.

The roadmap commences with the identification of research problem, aligned with the foundational steps emphasized in their study. Subsequently, a comprehensive review of the literature is carried out to explore the existing knowledge in related fields. Data collection then proceeds, and the analysis phase combined with thematic analysis and content analysis to extract meaningful insights from the collected data. The roadmap also carefully highlights how the findings will address the research questions and make contributions to the field of collaborative piano and conducting skills.

Figure 1.2

Research Roadmap

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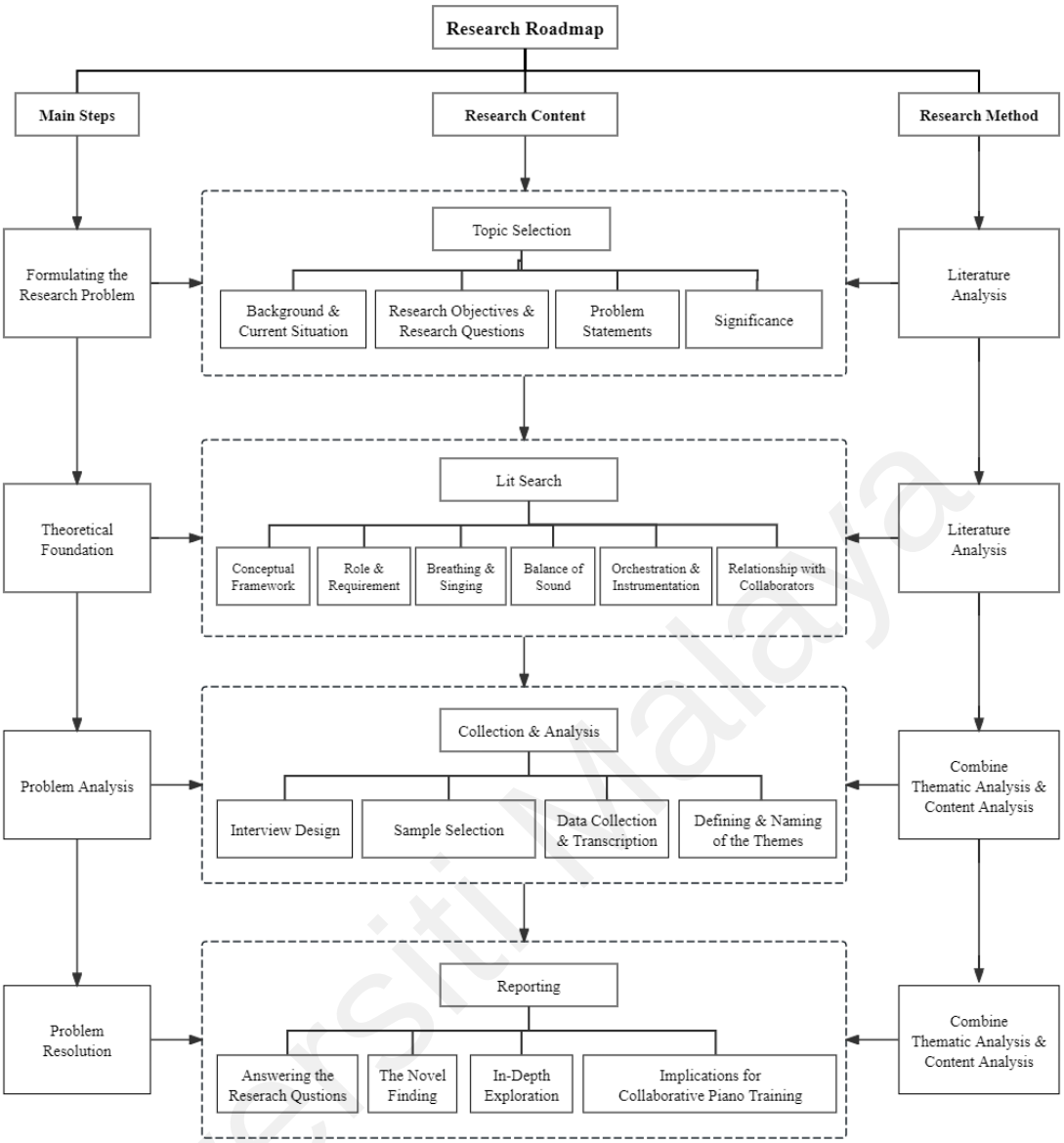

1.8 Definition of Terms

Collaborative piano: The art of piano cooperating with vocal music, instrumental music and other art forms, emphasizing the equality and importance of piano in cooperation (Jia Rongrong, 2022).

Conducting skills: The musical skills required for conducting, including musicianship, instrumental competence, vocal competence, analysis and repertory, sufficient interpersonal skills (NASM, 2022, p. 180).

Auditory discrimination: Advanced auditory skills required by conductors to deal with complex issues such as intonation, balance, and color (NASM, 2022, p. 181).

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Orchestration: Orchestration in conducting skills are the advanced skills in musical analysis, based on competence in counterpoint, harmony, composition, orchestration, and the ability to integrate analytical knowledge and skills in the development of artistic interpretations, include the arrangement of musical sections (melody, harmony, accompaniment), the management of pitch and volume, and the utilization of timbre characteristics (NASM, 2022, p. 181).

Interpersonal skills: The interpersonal skill of conductor skills includes leadership, teamwork and empathy. Conductors need to have sufficient interpersonal skills to be able to deal effectively with musicians and factors (NASM, 2022, p. 190).

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CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This literature review aims to provide a comprehensive overview of current research on collaborative piano and conducting, focusing on roles and requirement in collaboration, breathing and singing, balance of sound, orchestration, and interpersonal relationships.

This literature review encompasses a variety of sources, including seminal

articles and essential textbooks within the fields of collaborative piano and conducting. The reviewed literature spans nearly two decades and addresses both collaborative piano and conducting skills. Notable textbooks included in this review are the following three:

Katz's *The Complete Collaborator: The Pianist as Partner* (2009) has been described as the bible of collaborative pianists' training. It emphasizes the equal status of collaborative pianists in musical partnerships, provides practical strategies for collaborating with singers and instrumentalists, and offers effective methods for arranging orchestral reductions (Lee, 2016).

Rudolph's *The Grammar of Conducting* (1995) is known as one of the three guiding books (Olsen, 2017). This authoritative work on the art of conducting systematically analyzes the fundamental principles and conducting skills, emphasizes the interactive relationship between conductor and orchestra, and explores the psychology and musical expressiveness of conducting.

Labuta's *Basic Conducting Techniques* (2015) is a frequently used textbook. In the study by Regier et al. (2020) on the practice behavior of undergraduate conductors, it was identified as the most utilized textbook among participants in basic conducting classes, accounting for a usage rate of 33.08% based on questionnaires administered to undergraduate conducting students from 17 American institutions.

2.2 Role and Requirement

2.2.1 The Role and Requirement of Collaborative Pianist

The piano can assume a variety of roles within musical arrangements. Due to its harmonic and melodic capabilities, the piano functions as a self-sufficient solo instrument, capable of producing a rich and complete sound. Furthermore, the harmonic and timbral possibilities of the piano render it a popular and indispensable partner in

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small ensembles, including piano duets, trios, quartets, and quintets, where it provides harmonic support and background texture for solo string and wind instruments. Additionally, the piano frequently serves as an accompanist, offering musical support to the soloist and facilitating optimal performance (Kokotsaki, 2007).

As the practice of collaborative piano evolved, so too did the expectations of collaborative pianists. These musicians are now required to possess not only advanced functional piano skills but also the ability to distinguish between various types of accompaniment and musical styles across different historical periods. A comprehensive understanding of both the piano and the accompanying instrumental or vocal parts is essential, as is the capacity for score sight-reading. Collaborative pianists engage in deep analysis of the music, which informs their performance and enhances the collaborative process (Şuteu, 2021).

Essential skills for collaborative pianists include aural skills, sight-reading skills, performance skills, social skills, and the genuine enjoyment of performing with other musicians (Silvey & Springer, 2020). In collaboration, collaborative pianists should first capture the mood of the work in the prelude and provide cues and support to the soloists during climactic moments (Jia & Roongruang, 2022). Particularly in opera, collaborative pianists often replace the orchestra, playing the symphonic parts and acting as conductors, thereby overseeing the entire performance (Jia & Roongruang, 2022).

Within collaborative piano performance, collaborative pianists fulfill a range of roles, including: (1) co-performer, acting as an equal musical partner; (2) soloist, during designated passages; (3) coach, guiding during rehearsals; (4) accompanist, providing supportive musical foundation; and (5) collaborator, emphasizing equality in the performance dynamic (Roussou, 2013). In collaborations with vocalists, the pianist must serve as both designer and director, contributing to the emotional landscape of the

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music and enhancing the soloist's interpretation. A significant proportion of songs, approximately ninety percent, begin with the pianist, who in the role of director, is responsible for guiding the singer's initial phrases while also conveying the emotional context that informs those words (Katz, 2009).

The collaborator serves as a fourfold guardian, responsible for safeguarding the composer's intentions, adhering to the poet's requirements, addressing the partner's emotional and physical needs, and attending to their own artistic responsibilities (Katz, 2009). A collaborative pianist must be prepared for various situations that may arise during a performance, as they are often the only musician with access to the full score (Şuteu, 2021). The accompanist must possess a deep familiarity with the intricacies of a song. They should not only anticipate the overall structure and thematic highlights but also be acutely aware of the nuances and subtle transitions within the music (Moore, 1959).

2.2.2 The Role and Requirement of Conductor

As Romantic music flourished in the 19th century and professional orchestras expanded to include hundreds of musicians performing symphonic works, the role of the conductor became essential. Many of the early conductors were also composers, thus assuming the dual responsibility of both leader and interpreter (Ulrich, 2009). Over time, conducting evolved into a distinct professional discipline. Within an orchestra, the conductor, while one of many musicians, wields a unique instrument and occupies a singular role; they not only produce sound but also possess the capacity to think and act independently (Köping, 2007).

In the rehearsal, conductor must fulfill the role of teacher, director and group leader (Gustem et al., 2016). In the context of opera rehearsals, the conductor's attributes encompass expressive qualities, alongside a supportive role as both a teacher and vocal coach (Durrant, 2005). Furthermore, during concerts, the conductor serves as

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a mediator among the ensemble, the musical work, and the audience (Gustem et al., 2016). Consequently, the orchestral conductor must possess not only extensive musical knowledge but also proficiency as a pedagogue, communicator, and diplomat (Marotto et al., 2007).

Conducting can be conceptualized as a four-step process: (1) Composer to conductor: Engaging in score study to understand the composer's intentions; (2) Conductor to ensemble: Communicating these musical ideas to the ensemble; (3) Ensemble to conductor: Listening to and critically evaluating the ensemble's performance; and (4) Ensemble to audience: Melding and shaping the ensemble's sound to align with the composer's intentions (Ulrich, 2009).

During the performance, the conductor guides the players through body language, acting like a co-player. The conductor has to communicate musical ideas to the ensemble, listen and evaluate the players critically, and act like a coach. Additionally, the conductor collaborates with both the performers and the composer, facilitating a cohesive musical interpretation. In particular passages, the conductor may also take on the roles of soloist or accompanist (Ulrich, 2009).

2.3 Breathing and Singing

2.3.1 The Importance of Breathing in Musical Collaboration

All musicians benefit from incorporating breathing and singing into their practice, particularly conductors, pianists, violinists, and organists, who can perform their instruments without the need for air. While they may be able to play for extended periods without consciously breathing, this disregard for the importance of breath and singing can ultimately limit the success of their performances. Whether due to a physical necessity or an artistic choice, the failure to breathe during a collaborative performance would be detrimental (Kazt,2009).

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In Brown's study (2012), it was found that the body language and breathing patterns of wind players provide significant insights into their partners' intentions. Although the precise timing of a pianist's breath may not always be critical to the execution of the piano part, breathing serves as a vital means of facilitating collaboration with other musicians. Furthermore, non-wind players also utilize breath as a form of communication with their musical partners, employing audible sniffing and breathing. This form of communication can effectively convey important musical cues, such as the initiation of a phrase, the tempo of a section, and the required type of attack.

From a psychological point of view, psychophysiological synchronization occurs when people share their breath with their peers and gradually synchronize their breathing rates, and their emotional states become similar. Synchronizing breathing rates is one possible way to help musicians establish connection and consistency with each other. Players will be able to coordinate internal relationships and co-design music through collaborative breathing during rehearsals and performances (Yin, 2022).

2.3.2 The Importance of Breathing and Singing for Collaborative Pianists

According to Kazt's (2009) The Complete Collaborator, the main component of successful collaboration in collaborative piano is breathing. Kazt's credo is: If you can't sing it, you can't play it! To be in perfect sync with your partner, you need to breathe together.

Breathing in synchrony with the singer provides an effective means of understanding the partner's needs. For instance, when a singer is short of air, a collaborative pianist may instinctively exceed the notated tempo and rush through a phrase. Additionally, this synchronized breathing enables the pianist to better anticipate the singer's intentions. (Şuteu, 2021)

Singers often exhibit different behaviors during performances or competitions compared to rehearsals due to performance pressure. To accommodate the

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unpredictability of a singer's performance, a collaborative pianist must demonstrate flexibility and create a supportive "safety net" to enhance the singer's musical expression. This approach necessitates that the collaborative pianist focus less on strict timekeeping and instead breathe with the singer, thereby attuning to the varying rhythms that shape the delivery of words and phrases (Van Zyl & Cupido, 2021).

When the collaborative pianist breathes in sync with the singer, the music can continue seamlessly without any other intervention. However, when the pianist is required to initiate a phrase with the partner or when the partner is momentarily absent, it is essential for the keyboard part to maintain a rhythmic flow through continuous breath. The most effective way for a pianist to breathe naturally and make informed musical decisions is through singing (Kazt, 2009).

2.3.3 The Importance of Breathing and Humming for Conductors

To prepare for rehearsal effectively, the conductor must develop a clear and comprehensive understanding of the musical work. This includes the ability to sing all pitches across all sections (both vertically and horizontally) and a thorough knowledge of the lyrics, including their translations, the original instrumentation, relevant background information, and specific arrangements (Ulrich, 2009).

Furthermore, research conducted by Regier et al. (2020) indicated that undergraduate conductors engage in singing or humming musical lines more frequently than remaining silent during practice. This practice is instrumental in helping conductors familiarize themselves with different sections of the score. Additionally, employing strategies such as singing melodic lines and playing individual parts on the primary instrument has been shown to significantly enhance familiarity with the music score.

When the orchestra assumes the role of accompanist, it is essential for the conductor to discern when to lead and when to follow. The conductor must be adept at

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recognizing the appropriate moments to allow the soloist to take the forefront, and one effective method for achieving this is to synchronize breathing with the soloist. Moreover, an effective means of enhancing conducting skills involves engaging in humming and singing (Rudolf, 1995).

"Speaking with the chorus" is the secret of success for a choral conductor. A solid understanding of vocal production fundamentals, including pitch issues, vowel formation, and consonant articulation, enhances the conductor's ability to work effectively with singers. Furthermore, this knowledge aids the conductor in coordinating the choir during rehearsals (Rudolf, 1995).

2.4 Balance of Sound

2.4.1 Sounds Balance in Musical Collaboration

In musical collaboration, ensemble musicians must establish a common musical foundation to achieve a high-quality performance. This necessitates coordination and balance derived from a diverse range of ideas and performance approaches. Each musician plays a vital role in the effective functioning of the collaborative performance. Rehearsal serves as a process of musical adaptation, during which ensemble members explore various sound possibilities in an open and flexible manner. To achieve balance within the ensemble, musicians must engage in active listening, considering not only their own playing but also the contributions of others and the overall sound (Kokotsaki, 2007).

A fundamental principle of successful musical collaboration is the necessity for musicians to listen attentively to the voices of their partners, adapting their own voices to align with those of their partners. This collective effort aims to approximate the sound envisioned by the composer (Biasutti, 2013). High-quality ensembles require musicians to maintain a close connection and engage aurally with one another, while

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being fully prepared to immerse themselves in the repertoire, a process often characterized as a flow experience (Lee, 2016). This dynamic enables musicians to effectively coordinate their sounds and expressive intentions, with each individual's contribution playing a crucial role in the overall musical outcome (Lee, 2016).

Balance in music is an inexact science, characterized by numerous variables that preclude universal or consistent application. Musical collaboration is inherently flexible, and the primary reliance for musicians lies in their memory of sound proportions (Katz, 2009). The ear is paramount in any musical discipline, but its importance is particularly pronounced in collaborative contexts, where it plays a crucial role in the creativity of the performance (Browning, 2022).

2.4.2 Active Listening of Collaborative Pianists

The pianist serves not only as a partner to the soloist but also as a guardian of the composer's overall vision (Katz, 2009). Listening skills are paramount in collaborative piano performance, and collaborative pianists often exhibit a higher degree of aural proficiency than other musicians. This heightened ability enables them to assist soloists by critically listening for nuances in sound and color (Van Zyl & Cupido, 2021; Browning, 2022), providing constructive feedback on areas for improvement and other aspects of the ensemble (Hoekman, 2004). When the pianist cannot hear their partner, it is indicative of excessive volume; conversely, if the partner struggles to hear the pianist, the latter's efforts and skills may be rendered ineffective (Katz, 2009).

To achieve balance in musical collaboration, collaborative pianists must redirect their focus away from themselves to better engage with their partners. Having access to the full score enables collaborative pianists to navigate unpredictable situations during performances, allowing them to restore the flow of music by implementing remedial measures and making on-the-spot decisions when necessary. This process requires

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collaborative pianists to cue their partners through active listening, heightened alertness, and rapid recognition and reaction (Lee, 2016).

To establish an ideal relationship between a collaborative pianist and their partners, it is essential to cultivate a balanced engagement that encompasses the entirety of musicianship (Şuteu, 2021). The collaborative pianist must remain attentive to all melodic exchanges with their partner. By exploring the various layers of the score, ranging from challenging passages to harmony and expression, the interpretation is enriched, allowing for a more nuanced presentation of the musical elements (King & Roussou, 2017).

A choral collaborative pianist must maintain continuous attention to the choir throughout the performance to address any emerging challenges, such as difficult jumps, vocal crossovers, and dissonant harmonies. In instances where a singer struggles to find the correct pitch, the pianist should provide assistance by highlighting a specific section of the music or offering prompts when one vocal part becomes overpowering in relation to another. (Lee, 2016)

2.4.3 Auditory Discrimination of Conductors

An essential aspect of a successful performance is the conductor's understanding of the sound envisioned by the composer, which must be effectively communicated to the musicians. This "preconceived" sound begins to take shape during the conductor's preparation of the score (Ulrich, 1993). Prior to the first rehearsal, the conductor must consider various elements, including pitch, rhythm, tempo, dynamics, balance, phrasing, word stress, diction, intonation, and articulation, ensuring that the score is thoroughly examined before rehearsals commence (Ulrich, 1993). Once rehearsals begin, the conductor must actively listen to the musicians' performances, possess the ability to

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identify errors, provide constructive feedback, and guide the sound toward the envisioned ideal (Biasutti, 2013).

The initial steps of rehearsal focus on achieving accurate pitch and rhythm (Ulrich, 1993). A conductor must possess a trained ear capable of discerning the sounds of an entire orchestra, which may consist of nearly 100 musicians, striving for as much precision as possible (Koivunen & Wennes, 2011). Such auditory acuity is essential for identifying pitch inaccuracies and maintaining proper balance within the ensemble. This ability to listen effectively is partly innate but can also be developed over years of instrument mastery and sound evaluation (Koivunen, 2008). In addition to auditory skills, conductors require strong concentration and the capacity for aesthetic evaluation of the various balances among instrumental sections. This allows them to convey their vision and interpretation of the music to the musicians (Koivunen & Wennes, 2011). Each part of the music must be heard distinctly and in proper relation to the others. For instance, the melody, being the most critical component, should be clearly audible, while the contralto part should be appropriately balanced, sounding louder or softer depending on its significance within the context of the music (Rudolf, 1955).

Listening is a fundamental aspect of collaborative musical performance, characterized by human interaction. In orchestral performance, both conductor and musicians must engage in relational listening. As a member of the orchestra, the conductor receives the music produced by the musicians, evaluates its quality, and guides their efforts based on auditory cues, verbal prompts, and pronunciation. This process helps prepare, shape, and develop the overall sound of the orchestra, aligning the conductor's vision with the composition at hand. Simultaneously, the conductor must respond to the actual sound produced, coordinating the balance among different instrumental sections and adjusting their musical ideas to suit the performance

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(Koivunen & Wennes, 2011). Effective listening entails adopting a specific attitude and fostering a relationship with the musical environment, characterized by a willingness to accept information without bias. It requires the ability to act spontaneously and maintain an openness to unexpected situations and differences (Welsch, 1997).

2.5 Orchestration and Instrumentation

Orchestral instruments encompass strings, woodwinds, horns, brass, timpani, percussion, harps, and keyboards. Orchestra instrumentation include the fundamental principles, performance techniques and the infusion of quality (Adey, 1988). For conductors, essential components of their education include structural analysis, stylistic considerations, performance practices, and the ability to read orchestral scores. Additionally, if necessary, proficiency in playing these scores on the piano is a critical aspect of conducting skill. Learning orchestration is vital not only for effective cuing but also for the overall planning and interpretation of the conductor's approach (Rudolf, 1995).

2.5.1 Previous Preparation: Score-Reading

In ensemble performance, both collaborative pianists and conductors assume vital roles, as they possess the complete musical score. Effective preparation of musical materials significantly enhances their ability to interpret auditory and visual cues during rehearsals, fostering the development of their partners' potential (Kokotsaki, 2007). Collaborative pianists must be adept at navigating various situations that may arise during a recital, demonstrating adaptability and responsiveness, since they are the only musicians with the full score in front of them (Şuteu, 2021). Similarly, conductors bear the responsibility of translating the printed score into audible music, as they alone have

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access to the complete score, while other musicians engage solely with their respective instrumental parts (Koivunen & Wennes, 2011). A comprehensive understanding of the repertoire allows both collaborative pianists and conductors to identify challenging passages, assisting soloists in addressing technical difficulties and enabling timely adjustments during rehearsals to meet the musicians' evolving needs (Ulrich, 2009).

In many conducting courses, two primary areas of focus are conducting skills, specifically, the ability to communicate effectively with the ensemble, and score preparation, which entails understanding the composer's intentions. Conductors are required to familiarize themselves with musical notation prior to rehearsals and should possess knowledge of the work's form, tonality, instrumentation, and various other characteristics (Ulrich, 2009). A thorough understanding of the score enables conductors to make informed interpretative choices, guides their gestures, and provides an ideal mental model of the performance, allowing for meaningful comparisons with actual performances during rehearsals (Feldman et al., 2020). By engaging deeply with the score, conductors develop an internal sound image that enhances their awareness of what they wish to hear and achieve (Schuller, 1998). This internalization significantly influences the conductor's musical creation during actual performances (Labuta, 2015).

Collaborative pianists must engage with the score prior to rehearsals to ensure thorough preparation, paying particular attention to the melodic exchanges between the solo and accompaniment parts. Interpretive insights emerge from a careful examination of the score, which involves analyzing its various layers, from challenging passages to harmonic structures and expressive markings (King, 2017). A pianist must study the score rigorously, possessing sufficient knowledge of the orchestration to determine which reduced parts may be omitted, thus making informed decisions about what to include in their performance (Sellers, 2003). Additionally, the ability to sing the score accurately facilitates a deeper understanding of the repertoire (Katz, 2009). Sight-

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singing is a crucial skill in collaborative piano performance; a pianist's familiarity with stylistic elements and recognition of rhythmic patterns significantly aids their playing. Ultimately, reading a score entails more than merely deciphering individual notes; it requires a functional understanding of the music while continually enhancing technical proficiency in executing blocked chords, arpeggios, and scales with ease (Şuteu, 2021).

A choral collaborative pianist is required to perform a combination of at least four vocal sections simultaneously in order to facilitate the choir's learning of new music. This necessitates the ability to emphasize specific sections or combinations of sections while maintaining the integrity of their own musical part. Such a skill must be cultivated through prior practice by the choral collaborative pianist. Additionally, the pianist must strategically plan which notes will be played by the right hand and which by the left hand, particularly in passages where the vocal parts intersect or are separated by considerable distances (Lee, 2016).

The purpose of score reading extends beyond merely comprehending the content of a musical work; it involves understanding the rationale behind the composer's choices. Examining the work through the lens of the composer's broader output can significantly enhance our comprehension (Rudolf, 1995). With each reading of the score, one's perception may evolve, influenced by ongoing research and interpretation (Ulrich, 1993). Renowned conductor Arturo Toscanini famously remarked, "Every time I perform Beethoven's Fifth Symphony, I study the score as if I were conducting it for the first time." This practice underscores the idea that, despite having conducted the piece numerous times, the performance can remain fresh and invigorating.

2.5.2 Playing Orchestral Reductions on Piano

For collaborative pianists, engaging with opera, both in performance and as a coach, is a crucial aspect of their role (Katz, 2009). Given that pianos cannot fully replicate the sound of orchestras, collaborative pianists must exercise creativity in

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selecting and interpreting the music, resulting in unique renditions of each piece (Katz, 2009). Mastering the skill of playing orchestral reductions poses significant challenges for collaborative pianists, who must condense music originally composed for nearly 100 musicians into a two-handed format (Van Zyl & Cupido, 2021). This task requires the creation of original reduced compositions, often necessitating modifications to the full score to ensure that it is more pianistic and reflective of the orchestral quality (Garrett, 2018).

Reducing orchestral music for piano involves careful consideration and adaptation. Different versions of the score can convey varying interpretations, and the reverence traditionally accorded to the printed page in piano lessons may diminish in this context. Perfectionism is not attainable in the simplification of orchestral music; instead, the pianist must retain the essential characteristics of the original while ensuring that the arrangement is comfortable and practical for performance (Cranmer, 1970). An unconscious jump or rubato due to the distance of the piano keyboard could destroy any pretense of orchestral music (Katz, 2009).The reduced score should be based on a comprehensive understanding of orchestration and be technically manageable (Cranmer, 1970). Before undertaking the reduction process, it is imperative to study the full score meticulously, remaining as faithful as possible to its structure while accounting for important harmonies, thematic material, and instrumentation before deciding what to omit and what to preserve (Sellers, 2003).

One critical challenge is the inherent decay in piano mechanics, which contrasts with the sustained sound produced by an orchestra. To replicate the continuous sound quality of orchestral music, the pianist must often re-strike notes or entire chords. Determining when and how to re-strike is vital and requires constant auditory monitoring to ensure harmonic stability and support, even in the absence of certain instrumental parts (Katz, 2009).

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Moreover, while piano performance involves a single musician who can explore risk and expressivity through tempo and rubato, orchestral playing is a collective endeavor that necessitates consideration of the ensemble's dynamics. Understanding orchestration is essential prior to practicing orchestral works, and studying the full score in conjunction with listening to recordings serves as a primary method of preparation. Collaborative pianists must approach recordings as a means to learn orchestration rather than merely to replicate the music. The objective is to grasp the resultant sound of the musicians' movements, rather than to imitate the actions of individual players. For instance, if a passage originally intended for the cello is misidentified as belonging to the viola, this misinterpretation does not impact the collaborative pianist's treatment of the passage on the piano (Katz, 2009).

2.5.3 Mimicking the Timbre of Different Instruments on Piano

Mimicking an orchestra enables pianists to immerse themselves in a rich world of color, thereby heightening their awareness of timbre and texture upon returning to the piano (Katz, 2009). Collaborative pianists must draw upon their firsthand knowledge of orchestral sound and employ their imagination to envision the timbre and texture of an orchestra through the eighty-eight black and white keys. In some instances, omitting certain notes may be necessary to achieve a desired effect, while at other times, adding notes can enhance the overall orchestral sonority (Browning, 2022b).

To creatively apply the colors of orchestral instruments, it is essential for pianists to listen keenly to orchestral performances and develop a nuanced understanding of timbre and color (Browning, 2022b). When mimicking the timbre and emotional qualities of individual instruments in arias, pianists play a crucial role (Sellers, 2003); for example, the trombone in Verdi's *Don Carlo* underscores Eppoli's pain and guilt (Van Zyl & Cupido, 2021). A collaborative pianist who possesses both the technical skills of a soloist and the ability to evoke the sound of a full orchestra holds a

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significant advantage in performance.

Mimicking string instruments necessitates a warm and impactful sound, which requires the collaborative pianist to employ a flat, fleshy finger technique. It is important to note that the actual pitch of the double bass is one octave lower than notated in the score; thus, incorporating this lower octave when playing on the keyboard can enhance the color and depth of the string sound (Katz, 2009).

Whether imitating string instruments or collaborating with a string player, it is essential to understand the physical aspects and techniques associated with the instrument. Due to the decay and percussive nature of the piano, the instrument often relies on an illusion of continuity, whereas string legato is naturally and effectively executed with the bow. For string players, three-note chords can be played simultaneously, while four-note chords are typically divided into two parts; the bottom of the chord is played first, followed by the top on the beat. Therefore, when collaborating with a string player, the pianist must ensure that their performance is synchronized with these articulatory nuances (Katz, 2009).

The musicians in the wind section often function as soloists, which can introduce personal ego and psychological pressure. This soloistic mentality necessitates advanced finger techniques to effectively convey individual expression. In contrast, string players typically perform alongside numerous colleagues playing the same notes, resulting in a more homogeneous sound. This difference highlights the distinct artistic challenges faced by wind and string musicians in an ensemble context (Katz, 2009).

The sound of the flute is characterized by its softness; therefore, when the pianist plays the bottom register of the flute, it is crucial to avoid excessive intensity (Șuteu,2021). The flute produces a light and bright tone, while the clarinet and bassoon contribute beautiful low notes, and the oboe tends to have a more prominent sound. Due to the unique construction of woodwind instruments, they are incapable of producing

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more than one note simultaneously. Consequently, the collaborative pianist must exercise particular care to lift the other fingers when one finger is under pressure. The pianist should strive for a clean, clear, and focused sound, while still employing the use of the pedal, as this is essential for effectively imitating the timbre of woodwinds (Katz, 2009).

The golden overtones of brass instruments necessitate that the collaborative pianist emulate the warm tones characteristic of flat-fingered playing. This involves incorporating a touch of tenuto on each note and using the pedal to sustain the sound. Such techniques help to create the tonal quality and presence of a solo horn (Katz, 2009).

2.5.4 Playing Unpianistic Music on Piano

String tremolo is frequently encountered, allowing string players to execute continuous wrist rotations. In contrast, repeatedly striking a note can be an uncomfortable motion for pianists (Katz, 2009). What is originally a dramatic, shimmering tremolo in orchestral settings may become cumbersome and tiring on the piano (Browning, 2022b). The function of the tremolo is to provide stimulation within the material, and the imitation of its own motion is not important, using only the inside notes of the chord to play the tremolo can better masquerade as a string (Katz, 2009).

Repeated notes are easily executed by string players with their bows and by wind players with their tongues, but such passages are unpianistic. Collaborative pianists often face challenges with elements such as repeated thirds, which can be difficult or impractical to play (Katz, 2009). Therefore, collaborative pianists should listen to recordings alongside the full orchestral score to familiarize themselves with the orchestration and ensure that important sections are appropriately reflected in their piano performances (Lee, 2016).

In an orchestra, there are two possibilities for a jump in pitch. The first occurs when two instruments play simultaneously, which is not perceived as a jump by

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orchestral players. The second involves a single instrument, where the player may simply need to press a button or make minor adjustments to the strings. For keyboard players, however, a pitch jump represents a spatial interval that requires a fast tempo and the ability to change hand positions and stretch fingers to maintain a steady performance (Katz, 2009).

2.6 Relationship with Collaborators

2.6.1 The Empathy in Musical Collaboration

Musical ensembles present a compelling case within the framework of musical performance, as they necessitate not only the technical skills of individual musicians but also effective interaction among them. Collaborators are interconnected, and both verbal and non-verbal communication play crucial roles in this dynamic. The nature and quality of interactions among collaborators significantly influence the overall quality of the ensemble performance (Kokotsaki, 2007). A high-quality ensemble ultimately manifests as a state of integration between performers and the audience, where musicians perform as a cohesive unit rather than as isolated individuals, fostering close connections and deep engagement with one another (Lee, 2016).

Norman Doidge defines "collaboration" as a process that necessitates a high degree of trust, space-sharing, and dedication (Doidge, 2007, p. 35). In recent decades, there has been an increasing emphasis on the concept of empathy within interpersonal relationships (King & Roussou, 2017). Broadly defined, empathy is "the ability to understand and share the feelings of another" (*Oxford English Dictionary*, n.d.).

Empathy is a fundamental response rooted in both biological and cultural aspects of human interaction, serving as a foundation for creative collaborative processes and a crucial element of group music-making (King & Roussou, 2017). In musical partnerships, empathy is primarily cultivated through keen listening and

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effective communication, allowing one individual to be understood by another—an indication of responsiveness and mutual appreciation (Myers & White, 2012). A successful collaborative pianist must possess not only the skills and attributes of a soloist but also the capacity to engage effectively with partners (Van Zyl & Cupido, 2021). In a collaborative performance, the pianist's expressiveness significantly impacts the audience's perception and the partner's performance, meaning that a well-executed concert can enhance both accuracy and expressiveness for all musicians involved (Silvey & Springer, 2020).

In their study, King and Roussou (2017) provide four definitions of empathy within the context of ensemble performance. First, empathy is characterized as the relational aspect between collaborators, encompassing the ability to perceive a partner's intentions, musical expressions, and emotions, along with an unspoken awareness and understanding of one another. Second, empathy is viewed as flexibility in action, demonstrating a willingness to compromise and openness to the partner's feelings and emotions. Third, empathy is associated with specific character traits, such as supportiveness, friendliness, kindness, and agreeableness, reflecting an emotional attunement to one's partner. Finally, empathy is linked to the performer's collaborative spirit, encompassing the ability to work towards a common goal, readiness to assist partners, and the experience of mutual support throughout the performance.

Peter Keller's (2008) theoretical framework identifies three core cognitive-motor skills that underpin musical cooperation: anticipation (the ability to foresee a partner's sound while preparing one's own performance), adaptation (the mutual adjustment of timing and volume of the sounds produced), and attention (prioritizing one's own performance). Empathy is one of the factors influencing these core skills (Keller et al., 2014). In the study by King and Roussou (2017), interviewees noted that one of the functions of empathy is to foster experiential connectivity, enabling individuals to

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accurately direct and predict their partner's actions and to offer solutions to challenges that arise during rehearsals.

2.6.2 Emotional and Musical Support Provided by Collaborative Pianists

While emotional support for a partner is not typically regarded as a core skill for collaborative pianists, Mathilda, an interviewee in Van and Cupido's research (2021), indicated that she struggled to simulate orchestral timbre using various techniques due to her desire to provide support to her partner as if they were accompanied by an orchestra. Collaborative pianists are generally expected to act as empathizers in most situations, offering both moral and musical support to the soloist to facilitate the partnership (King & Roussou, 2017). This provision of support fosters a sense of safety for the soloist, reflecting the pianist's empathy and enhancing collaboration during performances. Higher levels of empathy contribute to improved ensemble performance (Keller, 2014).

Collaborative pianists need to comprehend the emotional states of the musicians with whom they work, as well as the text and the role their performance plays within the larger artistic context (Garrett, 2022). Collaborative piano represents a unique facet of ensemble performance, where the pianist is required to collaborate with various soloists in different settings; however, they are not always regarded as integral members of the chamber group and may have little to no prior rehearsal time (King & Roussou, 2017). Collaborative pianists consistently utilize the full score, which aids in guiding the ensemble and necessitates adaptation to their partners (King & Roussou, 2017).

In this capacity, collaborative pianists serve a regulatory role within ensembles, providing both spiritual and musical support, demonstrating musical adaptability, and are often referred to as "guides" and "facilitators" (Kokotsaki, 2007). Furthermore, there exists a "technical dimension" to the empathy of collaborative pianists, as they also function as coaches, tasked with offering technical solutions when rehearsals encounter

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challenges (King & Roussou, 2017). For instance, when a passage poses difficulties for the soloist's breathing, the collaborative pianist can help analyze the underlying issues and adjust their playing to provide the partner with greater breathing space (King & Roussou, 2017).

In addition to reading multiple combinations of vocal parts and supporting singers on the piano, a choral collaborative pianist plays a significant role as a secondary conductor. Choral collaborative pianists must trust and respond to the conductor's gestures while collaborating to interpret the music. They support the conductor's efforts and actively coach and motivate the singers, thereby enhancing the effectiveness of each choral rehearsal (Lee, 2016).

Previous studies have demonstrated the positive effects of collaborative piano on various instrumental training, including violin (Ergen & Bilen, 2010), viola (Sonsel & Tanrıverdi, 2019), cello (Topoglu, 2010), and flute (Üstün & Özer, 2020). Collaborative piano significantly enhances instrumental students' awareness and engagement. The pianist's ability to anticipate the musical context contributes to a heightened emotional experience during collaboration, alleviating psychological pressure on performers and facilitating a more relaxed, confident, and enjoyable performance, which in turn provides an immersive experience for the audience (Üstün & Özer, 2020). Furthermore, collaborative piano guides students in developing stable, positive, and optimistic psychological states (Sun & Yang, 2021). The fixed pitch of the piano aids the soloist in improving intonation and timbre while also enhancing the partner's rhythm, technique, and overall musical proficiency (Üstün & Özer, 2020).

2.6.3 Leadership and Empathy of Conductors

The conductor, whether in the context of a symphony orchestra or as a metaphor for authority and effective management, represents a powerful archetype of leadership. The conductor embodies an idealized image of a heroic figure who maintains control

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over a complex ensemble (Koivunen & Wennes, 2011). A well-rounded and trained musician, the conductor must understand group psychology to facilitate efficient rehearsals and motivate musicians to improve their performance (Rudolf, 1995). The leadership qualities of a conductor are manifest in both rehearsal settings and public performances, encompassing language proficiency, emotional self-awareness, social awareness (empathy), organizational insight, and social skills such as motivational leadership, influence, conflict management, and teamwork. Additionally, effective conductors exemplify strong self-management skills, particularly in emotional self-regulation (Carnicer et al., 2015).

Most musicians possess a deep passion for music, characterized by individual temperaments and qualities typical of performers (Rudolf, 1995). An orchestra comprises a diverse group of such musicians, and the conductor must navigate the complexities of this heterogeneous assembly of individualists. While the orchestra has the potential to create beautiful music, it is also a space rife with tension, intense emotions, and occasionally extreme hostility (Köping, 2003). These negative emotions are often projected onto the conductor, who bears the considerable responsibility of managing these dynamics. The conductor's role involves transforming this potential energy, emotion, and tension into harmonious music. In a study by Koivunen and Wennes (2011), one interviewed conductor acknowledged, "It's a tough profession, and the conductor has to accept that the orchestra hates him. The conductor should not fight against this energy but should channel it, turning his expertise and passion into a remarkable performance." A proficient conductor does not impose his own musical vision on the orchestra; rather, he integrates the musicality of all ensemble members.

The conductor's role is to facilitate the performance rather than to constrain the individual musician (Rudolf, 1995). Conductors do not impose their personal interpretations of music on the musicians; instead, they collaborate with the orchestra,

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distinguishing themselves from traditional leaders who exert complete control and authority (Koivunen & Wennes, 2011). This post-heroic approach to leadership transitions from an individualistic model to one of shared leadership that actively involves the contributions of followers, thereby fundamentally altering the language of leadership and redefining power dynamics (Fletcher, 2004). Leadership is conceptualized as a collective construct in which conductors and musicians engage in a complex network of interactions that enable the conductor to achieve desired outcomes (Crevani et al., 2007).

In Biasutti's (2013) study of orchestra rehearsal strategies, conducting interviewees highlighted that group performance is more challenging than individual playing. They noted that new ideas, stimuli, and difficulties constantly arise, necessitating the conductor to synthesize these elements while ensuring active collaboration from all members. During rehearsals, the combined skills of the musicians serve the collective goal, allowing the orchestra to function as a cohesive organism rather than merely the sum of its parts.

Noivunen and Wennes (2011) identified three dimensions for analyzing conductor leadership: relational listening, aesthetic judgment, and kinesthetic empathy. They emphasize the leadership process, focusing on the aesthetics and relationships inherent in conducting, regarding conducting as a verb rather than the individual conductor as a noun. While the conductor is undoubtedly a significant figure within the orchestra, the conducting process is fundamentally interactive, involving both the conductor and the musicians (leader and follower). This dynamic is directed by the conductor, who collaborates with the musicians, drawing upon instrumental skills, knowledge of the repertoire, and audiovisual perception.

Köping (2007) presented a relational perspective on the collective interaction within symphony orchestras to produce harmonious sound. He argued that the

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conductor and the orchestra engage in a process of interdependence and mutual adaptation, which he terms "relational achievement." This concept refers to an accomplishment or skill that is shared by all participants in the musical endeavor.

2.6.4 Body Language and Visual Communication

Visual communication plays a crucial role in facilitating the exchange of intentions among musicians during musical collaboration, enabling them to perceive valuable physical cues regarding forthcoming actions. This enhances coordination and improves the overall quality of the ensemble (Kokotsaki, 2007). When working with a soloist, auditory perception alone may be insufficient; in such instances, visual observation of the soloist can be beneficial. To effectively "be with the performers", the conductor typically maintains a constant visual focus on the stage (Rudolf, 1995).

Conducting can be likened to a form of dance, wherein conductors communicate their interpretations and intentions through body language. Typically, the right hand signals the beat, while the left hand conveys phrasing and intonation. Additionally, facial expressions, particularly the eyes, serve as important cues for musicians (Koivunen & Wennes, 2011). Symphony orchestra performances predominantly rely on non-verbal communication; while occasional verbal explanations may occur during rehearsals, the conductor's interaction with the musicians is primarily non-verbal (Koivunen, 2003). The most effective conductors need not rely on words, instead utilizing their bodies to demonstrate how the music should be played, embodying the principle that the more you show, the less you say (Wennes, 2002).

Body language plays a crucial role in musical collaboration, as it conveys signals within the ensemble dialogue. Pianists enjoy a distinct advantage in this regard, as they do not need to hold their instrument, allowing for greater freedom of arm movement. This freedom enables collaborative pianists to send more pronounced signals to their partners. Additionally, it is noteworthy that partners often pay close

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attention to the feet of the collaborative pianist, which can also serve as a source of non-verbal communication (Şuteu, 2021).

Collaborative pianists must maintain continuous visual connection with their partners, as extending a relaxed gaze facilitates better adaptation to changing circumstances (Katz, 2009). In collaborative performances, musicians enhance their effectiveness by visually observing the body movements and facial expressions of their partners, thereby interpreting and responding to their emotional and physical needs (Davidson & Broughton, 2016). When pianists sway in unison with their partners, their collaboration achieves greater synchronicity, with the leaders (the primary performers) often employing exaggerated movements to guide their partners (the secondary performers) (Keller & Appel, 2010).

When collaborating with singers, the consonants and subtle nuances of lyrics provide valuable information that facilitates communication. In contrast, when working with instrumental partners, the absence of text necessitates greater reliance on visual cues, with the bow of the string instrument serving as an effective conductor. Collaborative pianists should maintain their gaze on the area in front of the piano stand, or slightly to the right. During complex passages, they should emulate a conductor by attentively monitoring their partners to avoid inducing a sense of urgency (Katz, 2009).

Additionally, choral collaborative pianists must develop peripheral vision to effectively observe the conductor's beat while simultaneously reading the score (Lee, 2016).

2.7 Summary and Research Gaps

This literature review examines the potential benefits of acquiring conducting skills for collaborative pianists, focusing on five key areas: Role and Requirement, Breathing and Singing, Balance of Sounds, Orchestration and Instrumentation, and

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Relationship with Collaborators.

Collaborative pianists and conductors both play multifaceted roles in music performance. Pianists must adapt to various roles like accompanist, soloist, and collaborator, requiring skills in aural perception, sight-reading, and communication (Roussou, 2013; Katz, 2009). Conductors, evolving from composer-leaders, guide ensembles through score interpretation, communication, and performance, balancing roles as teachers, mediators, and interpreters (Gusystem et al., 2016; Marotto, Roos & Victor, 2007; Durrant, 2005).

Breathing plays a crucial role in musical collaboration for both pianists and conductors (Yin, 2022; Brown, 2012; Kazt, 2009). For pianists, synchronized breathing with vocalists enhances performance flexibility and emotional connection (Van Zyl & Cupido, 2021; Şuteu, 2021; Kazt, 2009). Conductors benefit from singing or humming to internalize musical lines and synchronize with their ensemble, aiding in effective leadership and coordination during rehearsals and performances (Silvey, 2011; Regier et al., 2020; Ulrich, 2009; Rudolf, 1995).

In musical collaboration, achieving sound balance requires musicians to actively listen and adapt to each other's contributions (Browning, 2022; Lee, 2016; Biasutti, 2013; Katz, 2009; Kokotsaki, 2007). Collaborative pianists use listening skills to support and adjust to their partners, while conductors must critically hear and correct an ensemble's sound to match the composer's vision, balancing individual and collective parts (Browning, 2022; Şuteu, 2021; Van Zyl & Cupido, 2021; King & Roussou, 2017; Lee, 2016; Biasutti, 2013; Koivunen & Wennes, 2011; Katz, 2009; Koivunen, 2008; Hoekman, 2004; Welsch, 1997; Rudolf, 1955).

Orchestration and instrumentation involve understanding the various orchestra sections and their techniques, essential for conductors and collaborative pianists. Effective score preparation and orchestral reduction for piano are crucial skills

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(Browning, 2022; Van Zyl & Cupido, 2021; Şuteu, 2021; Feldman et al., 2020; King & Roussou, 2017; Lee, 2016; Labuta, 2015; Koivunen & Wennes, 2011; Katz, 2009; Garrett, 2018; Kokotsaki, 2007; Sellers, 2003; Schuller, 1998). Pianists must mimic orchestral timbres creatively, manage unpianistic music challenges, and adapt techniques to simulate orchestral sound accurately (Browning, 2022; Van Zyl & Cupido, 2021; Şuteu,2021; Lee, 2016; Katz, 2009; Sellers, 2003).

Empathy in musical collaboration enhances ensemble performance by fostering trust, understanding, and effective communication between musicians (Van Zyl & Cupido, 2021; Silvey & Springer, 2020; King & Roussou, 2017; Lee, 2016; Keller, Novembre & Hove, 2014; Myers & White, 2012; Keller, 2008; Kokotsaki, 2007). Collaborative pianists and conductors must master both verbal and non-verbal cues, adapt to partners' needs, and use body language to convey and interpret musical intentions, this mutual responsiveness and support improve overall performance quality (Garrett, 2022; Sun & Yang, 2021; Van Zyl & Cupido, 2021; Şuteu, 2021; King & Roussou, 2017; Lee, 2016; Davidson & Broughton, 2016; Keller, 2014; Koivunen & Wennes, 2011; Kokotsaki, 2007).

However, the current study perspective on collaborative pianists is limited, and there is no literature on the perceptions and benefits of collaborative pianists on conducting skills. Drawing on her own transition from music educator to collaborative pianist in South Africa and the challenges she faced in her new work environment, Jessica de Koker (2019) presents a proposed undergraduate degree course outline for a collaborative piano major at a South African university. Her proposed course outline is highly practical and includes modules on conducting, arranging, and orchestration, thereby contributing valuable insights to the training of collaborative pianists. This study hope to obtain an in-depth understanding of collaborative pianists' perception and

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experience of conducting skills, and reveal the potential relationship between collaborative piano and conducting, with a view to providing new ideas for collaborative piano performance and education.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This study is guided by a conceptual framework comprising three key dimensions: aural discrimination skills, orchestration skills, and interpersonal skills, along with their shared benefits. This framework provides a theoretical foundation for exploring how collaborative pianists perceive and benefit from conducting skills in their professional practice. The research aims to uncover the practical and experiential

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relevance of these skills to collaborative piano performance and to validate or refine the proposed framework based on empirical data.

The study is conducted through in-depth semi-structured interviews with 5 collaborative pianists who have conducting experience and skills, selected through purposive sampling. The interviews will follow the five steps proposed by Kallio et al. (2016) to ensure the development and reliability of the interview protocol. The collected data will be analyzed using the six-step thematic analysis method developed by Braun and Clarke (2006). The analysis process will be structured around the conceptual framework, with themes categorized according to the three dimensions and their interconnected benefits, aiming to provide insights into collaborative pianists' experiences and perceptions of conducting skills.

Additionally, this study will conduct a content analysis of the literature following the four steps outlined by Seuring and Gold (2012). This approach aims to verify the hypothesis that conducting skills benefit collaborative piano practice, explain the significance of the findings, and compare them with the results from interviews. The literature review will also focus on identifying evidence supporting or challenging the framework's dimensions and shared benefits. By integrating interview data and literature analysis, this study seeks to enhance the credibility and persuasiveness of the results. The entire analysis process will be meticulously documented to ensure transparency and repeatability.

3.2 Interview Design and Data Collection

3.2.1 Semi-Structured Interview

Semi-structured interviews have emerged as the predominant qualitative data collection method in the social sciences (Madill, 2011; Kallio et al., 2006). This approach is particularly effective when detailed insights into interviewees' views and

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opinions on a specific topic are required (Smith, 1995). In semi-structured interviews, researchers explore participants' perceptions, intentions, and attitudes, thereby gaining valuable insights into "experience, meaning, life world, conversation, dialogue, narrative, and language" (Kvale, 1996, p. 11). Interviewers pose topic-related and open-ended questions, tailoring the wording and sequence to suit each interviewee and their responses, while also employing prompts and probes to facilitate deeper discussion (Colwell, 2006).

Since the purpose of this study was to explore the experiences and perceptions of collaborative pianists about conducting skills in collaborative piano performance and practice, rather than attempting to explore the behaviour of collaborative pianists, which would be perceived by external observers, it was considered appropriate to use interviews to investigate the inner perceptions of musicians on this issue (Arksey & Knight, 1999). Interviews offer advantages that surveys do not, enabling researchers to explore issues more profoundly and to understand the underlying reasons behind how individuals frame their ideas. They facilitate the examination of how and why people establish connections between concepts, values, events, opinions, and behaviors. Furthermore, interviews can enhance the interpretation of survey data, providing richer contextual insights (Hochschild, 2009).

This study developed semi-structured interview guidelines based on the five steps proposed by Kallio et al. (2006) to enhance the objectivity and credibility of the research. The five steps included: (1) identifying the prerequisites for using semi-structured interviews; (2) retrieving and utilizing existing knowledge; (3) formulating the preliminary semi-structured interview guide; (4) conducting pilot testing of the guide; and (5) presenting the complete semi-structured interview guide.

Semi-structured in-depth interview is the most widely used interview form in qualitative research, which can be an individual interview or a group interview. This

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study will use a combination of semi-structured interviews with personal in-depth interviews, which allow interviewers to delve into social and personal issues and can provide rich and in-depth information about personal experiences. (Rubin & Rubin, 2005) Therefore, in-depth personal interviews are useful when researcher wants detailed information about one's thoughts and behaviors or when researcher wants to explore new issues in depth (Boyce & Neale, 2006).

The process of in-depth interviews is a personal, intimate encounter that uses public, direct, and oral questions to elicit detailed narratives and stories from participants (DiCicco-Bloom & Crabtree, 2006). It provides more detailed information than other data collection methods, such as surveys, and can also provide a more relaxed atmosphere in which to gather information, and participants will feel more comfortable talking about it than filling out questionnaires (Boyce & Neale, 2006).

3.2.2 Preparation for the Interview

In the initial phase of the decision to utilize semi-structured interviews, the researcher identified the field of study through existing knowledge and previous research, specifically exploring collaborative pianists' perceptions and opinions on conducting skills while determining the prerequisites for employing semi-structured interviews (Tumer 2010). The interview questions were carefully formulated based on this prior knowledge, ensuring they aligned with the study's objectives and the conceptual framework. In semi-structured interviews, participants were able to express diverse opinions by focusing on issues that held significance for them (Cridland et al., 2015).

The second phase involved the retrieval and utilization of existing knowledge, which included a critical evaluation of prior research through an extensive literature review and the potential necessity to supplement empirical knowledge (Krauss et al., 2009). This process aimed to achieve a comprehensive understanding of the topic and to

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establish a predetermined framework for the interviews (Turner, 2010). This predetermined framework, based on the conceptual model encompassing aural discrimination, orchestration, and interpersonal skills, ensured that the interviews were both focused and flexible, capturing the multidimensional nature of the topic.

3.2.3 Semi-structured Interview Guide

The third phase involved leveraging existing knowledge of structure, logic, and coherence to develop preliminary semi-structured interview guidelines. The interview guide consists of questions designed to steer the conversation toward the research topic, and its quality significantly influences both the conduct of the interview and the subsequent data analysis (Whiting, 2008). Given that the format of the semi-structured interview guide is inherently flexible, the order of questions can be adjusted, allowing for fluid transitions between topics (Dearnley, 2005). The carefully crafted questions are participant-oriented, clearly articulated, and descriptive, aiming to elicit spontaneous, in-depth, unique, and vivid responses, thereby capturing personal feelings and stories to generate the richest possible data (Turner, 2010; Dearnley, 2005; Baumbusch, 2010).

The interview guide comprises two levels of questions: main themes and follow-up questions. Each participant was presented with main themes addressing the main topics of the study, encouraging them to discuss their perceptions and experiences freely (Kallio et al., 2006). The sequence of these themes is progressive and logical (Krauss et al., 2009) and serves to create a relaxed interview atmosphere (Whiting, 2008). Follow-up questions were pre-designed to enhance topic consistency among participants and ensure a fluid interview process. These questions aimed to clarify uncertainties and guide the conversation toward the research focus. Additionally, as new concepts emerged, follow-up questions were adapted to participants' responses, allowing the interviewer to seek further information or examples on specific points raised (Turner, 2010; Baumbusch, 2010; Whiting, 2008).

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The fourth phase involved a pilot test of the semi-structured interview guide. The preliminary guide was evaluated to eliminate ambiguities and leading questions, ensuring the scope and relevance of the content aligned with the research topic. Additionally, the guide was presented to experts for critical evaluation, allowing them to assess the appropriateness and comprehensiveness of both the guide's content and research questions. Finally, the researcher assumed the role of a participant to conduct field tests, facilitating interviews to ensure the guide's clarity, evaluate the validity of questions, and gain insights into the interview experience. This process also enhanced pre-evaluation of research ethics (Chenail, 2011).

The fifth phase involved the presentation of a comprehensive, clear, logical, and open-ended guide for semi-structured interviews, as detailed in Appendix A . This guide was designed to align with the conceptual framework of the study, which consists of three key dimensions: aural discrimination skills, orchestration skills, and interpersonal skills, along with their shared benefits. This guide serves as a valuable mechanism for research purposes and establishes an overall framework for the interviews. While the guide incorporates the study's core topics, including the dimensions and their interrelationships, it maintains flexibility and does not impose rigid adherence to a specific script. Instead, it offers participants guidance on the subjects to discuss, enabling them to share diverse and nuanced perspectives. This approach ensures that the interviews remain both focused and open-ended, fostering an in-depth exploration of the participants' experiences and perceptions (Gill et al., 2008).

The number of interviews held was determined by data saturation, which is defined as "the degree to which new data repeat what was expressed in previous data" (Saunders et al., 2018).

3.3 The Sample of Interview

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3.3.1 Expert Sampling in Purposive Sampling

Purposive sampling is an effective method when research design necessitates the selection of participants who are most likely to provide relevant and in-depth data (Rai & Thapa, 2015). This approach is driven by a specific purpose, resulting in a sample that includes individuals of interest while excluding those who do not align with the study's objectives. This strategy enhances the researcher's ability to address the research question and mitigates issues related to under-representation, thereby avoiding unnecessary complexity and time expenditure (Bungay et al., 2016). In this study, purposive sampling was employed to collect samples from collaborative pianists possessing conducting skills or experience.

Expert sampling is a specific type of purposive sampling technique that is particularly suitable for the exploratory phase of qualitative research, where the researcher seeks to gather insights from individuals with specialized expertise to identify potential new areas of interest or to inform the selection of additional participants (Rai & Thapa, 2015). Given the limited research perspective on collaborative pianists, and the absence of studies addressing their perceptions and experiences regarding conducting skills, expert sampling is deemed appropriate for this study.

A purposive sample constitutes a non-representative subset of a larger population, specifically designed to fulfill particular needs and objectives, and thus does not aim to represent the entire population (Suri, 2011). Despite inherent limitations, purposive sampling proves beneficial when certain units are deemed crucial for in-depth study, enabling researchers to obtain the most pertinent information from the sample (Bungay et al., 2016). In this methodology, a small yet carefully selected sample can effectively represent the broader population, thereby providing researchers with enhanced analytical leverage (Rai & Thapa, 2015).

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3.3.2 Sample Size

In their study, Sim et al. (2018) propose that sample sizes for basic theoretical investigations in qualitative research typically range from 5 to 35 participants, based on methodological considerations and insights from prior studies. Morse (2000) argues that the appropriate sample size is contingent upon several factors: the scope of the research question (the wider the scope, the larger the sample size required); the nature of the topic (the more "obvious", the smaller the sample size); the quality of the data (the richer the data, the smaller the sample size); the study design (more complex, larger sample size); and shaded data (if the interview reveals something about someone else's opinion other than the interviewee's own, this may require a smaller sample size).

This study aims to explore the perceptions and benefits of conducting skills by collaborative pianists, with research questions that are both specific and focused. The topic is situated within the realm of professional practice and skills in music, representing a relatively specialized and domain-specific area of inquiry. By emphasizing an in-depth understanding of the perceptions and experiences of particular groups, interviews with five professional collaborative pianists can yield rich, detailed data that enhances the ability to address the research questions effectively (Sim et al., 2018; Malterud et al., 2016; Morse, 2000). This sample size aligns with qualitative research practices in specialized fields, where data saturation is often achieved with a small number of participants due to the depth and specificity of insights provided. In this study, recurring themes and consistent responses emerged during the interviews, indicating a point of saturation had been reached. (Sim et al., 2018; Malterud et al., 2016; Guest et al., 2006)

In the interviews, the researcher prioritized the quality of the data collected. Through the use of comprehensive interview guidance, carefully crafted questions, and a reflective analysis process, the researcher aimed to capture the collaborative pianists'

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profound insights regarding the perceptions and benefits of conducting skills. This approach ensured both the depth and breadth of the data gathered, thereby enhancing the credibility and validity of the research findings (Sim et al., 2018; Malterud et al., 2016; Creswell & Poth, 2016; Morse, 2000).

3.3.3 Participants Demographic Details

This study recruited participants who were volunteers from among musicians with experience in collaborative piano and a foundational understanding of conducting skills, employing purposive sampling to select specific interviewees. The study involved five collaborating pianists, aged between 27 and 42, consisting of 2 males and 3 females. All participants hold advanced degrees in music, specializing in either collaborative piano, piano performance, or conducting.

The participants possess over 10 years of experience in the study and practice of collaborative piano, collectively accumulating more than 8 years of experience in various musical contexts, including orchestras, chamber music ensembles, and choirs. Based on their extensive backgrounds, self-evaluations, and peer evaluations, their levels of expertise in collaborative piano and conducting have been categorized into three levels: novice, intermediate, and experienced. Specifically, Interviewee 1 is classified as experienced in collaborative piano and intermediate in conducting; Interviewee 2 is classified as experienced in both domains; Interviewee 3 is categorized as experienced in collaborative piano and novice in conducting; and Interviewees 4 and 5 are classified as intermediate in collaborative piano and novice in conducting.
Each participant is currently employed as a collaborative pianist, with three working at universities and two at high schools. All participants possess extensive experience in collaborative work, encompassing vocalists, instrumentalists, choir rehearsals, competitions, and performances. Specifically, two participants demonstrate greater proficiency in working with vocalists and choirs, two exhibit stronger skills in

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collaborating with instrumentalists, and one participant excels in working with both vocalists and instrumentalists.

In the realm of conducting, they have each served in various capacities, ranging from conducting local orchestras and choirs to leading school choirs and collaborating as pianists. Three of the participants possess extensive prior conducting experience, while the remaining participants have limited conducting experience. Their active involvement in a diverse array of musical styles, including classical, contemporary, and jazz, has enabled them to develop a broad range of interpretative skills that enhance their practice.

3.3.3.1 Yang Jieyuxuan. Yang Jieyuxuan was born into a musical family in Guangzhou, where she began her studies in piano and violin at the age of six. In 2010, she was admitted to the piano department of the Shanghai Conservatory of Music and Attached Middle School, studying under Chinese-American pianist Sun Pengjie. She subsequently excelled in her studies at the China Conservatory of Music under German pianist Yu Meina and, in 2019, enrolled at the Royal Birmingham Conservatoire to focus on collaborative piano with esteemed pianists Victor Sangiorgio and Alasdair Beason.

Currently, Yuxuan serves as a lecturer in Art Direction at South China Normal University and is an active member of the Guangzhou Opera Society and the Trout Opera Art Troupe. She has benefited from the guidance of renowned professor Zhang Jialin, a prominent figure in collaborative piano at the Central Conservatory of Music. Her accolades include the Excellent Performance Award at the First CCOM (Central Conservatory of Music) Collaborative Piano Art Festival and the Excellent Piano Accompaniment Award at the sixth and seventh National High School of Art Vocal Music Performance 'Peacock Cup'.

3.3.3.2 Zhang Zhen. Zhang Zhen is currently a lecturer in Conducting at South

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China Normal University and serves as the permanent conductor of both the Pearl Shadow Orchestra and the Symphony Orchestra of SCNU. He was among the first conducting students at the Central Conservatory of Music Attached Middle School, where he studied under Professor Xia Xiaotang before being admitted to the Conducting Department of the Central Conservatory of Music. Zhang Zhen has collaborated with several professional orchestras, including the Guangzhou Symphony Orchestra, the Guangzhou Youth Symphony Orchestra, the Royal Orchestra of Amsterdam, the Sichuan Philharmonic Orchestra, and the Gansu Opera House Symphony Orchestra.

In addition to his conducting expertise, Zhang Zhen possesses extensive experience in collaborative piano. Throughout his conducting studies, he engaged in courses on double piano and art direction, and served as a collaborative pianist for instrumental final examinations at the Central Conservatory of Music. In 2018, he toured nine cities in Guangdong as a collaborative pianist alongside trombonist Lei Zhen.

3.3.3.3 **Ran Rui.** Ran Rui graduated from the Piano Department of Guizhou University, where she also served as an art director for a choir, collaborating with several vocal soloists during her studies. Following her graduation, she continued her work as an artistic director in the choir while furthering her education in conducting. She studied under renowned choral conductors He Liu and Zhang Bin and conducted multiple choirs in Zhuhai.

Currently, Ran Rui is a music teacher at Zhuhai No. 1 High School and holds several prominent positions, including Director of the Guangdong Choral Association, Host of the Zhuhai Primary and Middle School Choral Studio, and Conductor and Art Director of the Starry Sky Choir at Zhuhai No. 1 High School. Additionally, she serves as the Art Director of the Zhuhai Sixteenth Note Choir. In 2019, she received the Piano Accompaniment Award at the China Asia Pacific International City Choir Festival.

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3.3.3.4 Lin Yu. Lin Yu was admitted to the Piano Major in the Music Education Department of South China Normal University in 2015, later transitioning to a focus on Art Direction. She currently serves as a piano lecturer at the Basic Education College of South China Normal University and is the conductor of the Chamber Orchestra of Shanwei, affiliated with South China Normal University. Lin Yu has also held the position of Art Director for the Peacock Cup on several occasions, showcasing her leadership and expertise in the field.

3.3.3.5 Cao Xi. Cao Xi was admitted to the Music Education Department of Xinghai Conservatory of Music in 2015, where he initially majored in piano. He later pursued advanced studies in composition and art direction as a master's student at the same institution. In 2018, he served as the Art Director for the Foshan Union Examination and also held the position of Art Director for the Peacock Cup.

Currently, Cao Xi works as a music teacher, choir director, and art director at Shenzhen Jinxiu Experimental School, where he continues to foster musical talent and creativity among his students.

3.4 Interview Data Analysis

3.4.1 The Guiding Analytical Framework of the Interview Data Analysis

Thematic analysis is a methodological approach employed to identify, analyze, and report themes within qualitative data. This technique facilitates the organization and description of the nuanced details inherent in the data set, thereby elucidating various aspects of the research topic with relative efficiency (Boyatzis, 1998). Thematic analysis is characterized by its flexibility and applicability across a range of theoretical and epistemological frameworks, ultimately providing a rich, detailed, and complex interpretation of the data (Braun & Clarke, 2006).

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The objective of this study was to conduct an in-depth exploration of the experiences and perceptions of five collaborative pianists, with the aim of informing both performance and teaching practices in collaborative piano. Given the exploratory nature of this research, thematic analysis was employed as the primary analytical framework (Hoskyns, 2016). The study was guided by a conceptual framework consisting of three key dimensions, aural discrimination skills, orchestration skills, and interpersonal skills, along with their shared benefits. This framework provided a structured lens for organizing and interpreting the data while allowing flexibility to identify emergent themes that extend beyond the predefined dimensions.

To explore the experiences and perceptions of collaborative pianists regarding conducting skills, the thematic analysis was conducted following the six phases outlined by Braun and Clarke (2006). These phases included:

Step 1, familiarizing oneself with the data: The researcher immersed themselves in the data, identifying initial key statements related to the dimensions of the conceptual framework and their interconnected benefits.

Step 2, generating initial codes: Coding was performed systematically across the dataset, with codes grouped under categories corresponding to the three dimensions (e.g., “enhanced listening precision” under aural discrimination). Emerging codes outside the framework were also noted for further examination.

Step 3, searching for themes: Themes were identified within each dimension of the framework, such as “problem-solving in ensemble balance” under aural discrimination or “enhanced leadership in collaborative settings” under interpersonal skills. Themes capturing shared benefits, such as improved score analysis and artistic expression, were also identified.

Step 4, reviewing themes: The themes were reviewed and refined to ensure coherence within each dimension and to explore their interconnections across

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dimensions, reflecting the integrated nature of conducting skills.

Step 5, defining and naming themes: Themes were clearly defined, emphasizing their alignment with the conceptual framework while incorporating new insights. For example, “Empathy as a bridge in ensemble dynamics” emerged as a cross-dimensional theme.

Step 6, producing the report: The final analysis provided a detailed narrative of how the data corresponded to and expanded upon the conceptual framework, highlighting both anticipated and unexpected findings.

Thematic analysis within this framework effectively summarized the key features of the data, provided “thick descriptions” of collaborative pianists’ experiences, and highlighted the nuanced ways in which conducting skills influence their practice. By structuring the analysis around the conceptual framework, the study not only ensured coherence but also revealed how the three dimensions and their shared benefits interrelate, offering a comprehensive understanding of the topic (Braun & Clarke, 2006).

3.4.2 Data Transcription

This research obtained participants’ perspectives and experiences by collecting data directly through individual face-to-face semi-structured interviews utilizing open-ended questions (Creswell, 2014). The interviews were audio recorded and transcribed verbatim, with the transcriptions subsequently shared with participants to validate the textual data as part of the member-checking process in qualitative research (Lincoln & Guba, 1985). Although the transcription process can be time-consuming and tedious, it serves as an essential step in familiarizing oneself with the data and should be regarded as “a key phase of data analysis within interpretative qualitative methodology”, rather than merely a mechanical act of transcribing speech (Bird, 2005).

Fuß and Karbach (2014) proposed three types of orthographic transcriptions: (1) journalistic; (2) broad scientific; and (3) detailed scientific. Broad scientific

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transcription employs standard orthography while accommodating ungrammatical sentences, common dialects, slang expressions, and simplified forms. This method captures filled pauses and utilizes punctuation to denote intonation features, such as rising or falling voice. While it may align with the speech signal temporally, it does not necessarily correspond at the word level. This study adopted broad scientific orthography for transcription, thereby preserving a more authentic representation of the oral narrative.

The data were labeled and coded according to the phases outlined by Braun and Clarke (2006). The initial step involved familiarization with the data, during which the researchers engaged in multiple readings informed by prior knowledge, the conceptual framework, and preliminary analytical interests. This immersive review aimed to yield a comprehensive understanding of the data, allowing for the identification of meanings, themes, and relevant insights within the framework's structure. By grounding the analysis in the conceptual framework, the researchers ensured a focused yet flexible approach to interpreting the data. Consequently, this phase established a foundational basis for the subsequent stages of analysis.

3.4.3 Data Coding

Upon familiarization with the data, the second step commenced, involving coding as an integral part of the data analysis process (Miles & Huberman, 1994). The researcher generated initial codes to encapsulate relevant statements related to each participant's life experience, utilizing symbols, descriptive words, phrases, and unique identifiers (Tracy, 2013). This manual coding involved identifying codes and aligning them with corresponding data extracts, ensuring comprehensive coverage of pertinent data. The coding process was guided by theory-driven themes, as the researcher approached the data with specific problems to address (Braun & Clarke, 2006). This

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manual coding process was deeply informed by the conceptual framework, ensuring that the codes aligned with the theoretical underpinnings and research questions. Codes were selected to reflect both the explicit content of the data and its alignment with theory-driven themes, as the researcher approached the data with specific problems and concepts to address (Braun & Clarke, 2006).

After identifying the various codes, the researchers examined similarities among the codes within each case and organized the data into meaningful groups (Reid et al., 2005). The conceptual framework guided this step, enabling the researchers to systematically link emerging codes to broader constructs and insights derived from the framework. They systematically processed the entire data set, giving equal and thorough attention to each data item while identifying notable aspects that could form the foundation of recurring patterns (themes) within the data set (Braun & Clarke, 2006). By leveraging the conceptual framework, the researchers were able to generate as many potential themes as time allowed, ensuring that these themes were both comprehensive and theoretically grounded (Bryman, 2001).

3.4.4 The Searching and Reviewing of Themes

After all data had been initially coded and collated, the third step commenced, focusing on broader thematic analysis. The researcher categorized the different codes into potential themes, combining them to formulate overarching themes and collating relevant coded data extracts within these themes. The conceptual framework played a key role in this phase, providing a lens through which the relationships between codes, themes, and sub-themes were examined. Researcher developed some initial codes into themes and others into sub-themes while discarding codes that lacked relevance or alignment with the framework's constructs. This step concluded with a collection of

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themes and sub-themes, along with their associated coded data extracts, which were structured in accordance with the theoretical insights derived from the framework (Braun & Clarke, 2006).

Step 4 involved the refinement of candidate themes developed in Step 3. Researchers evaluated whether certain themes were sufficiently substantiated by data or if they were too diverse to stand as distinct themes. Some themes merged to form broader themes, while others required further delineation into separate themes. The conceptual framework ensured that the refinement process remained grounded in the study's theoretical foundations, facilitating a deeper understanding of how themes reflected the research objectives. It was essential for researchers to ensure that the data within each theme could be meaningfully integrated and that clear distinctions existed between the themes (Braun & Clarke, 2006).

The researcher reviewed and refined the themes at two levels. In the first level, the focus was on coded data extracts, where the researcher reread all collated summaries for each theme to assess their coherence. If a candidate theme proved inadequate, it was redesigned to identify more suitable data extracts, aiming to create a satisfactory "thematic map". The second level involved a similar process but addressed the entire data set, evaluating whether the thematic map accurately represented the significant aspects of the data. Acknowledging that coding is an ongoing and dynamic process, the researcher reread and further refined the data set throughout the analysis. Ultimately, this process enabled the researcher to gain a comprehensive understanding of the themes, their interrelationships, and the overarching narrative conveyed by the data (Braun & Clarke, 2006).

3.4.5 The Defining and Naming of Themes

Once a satisfactory "thematic map" was established, the researcher commenced Step 5, which involved defining and refining the themes while analyzing the data within

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each theme. This process, guided by the conceptual framework, entailed identifying the "essence" of each theme, as well as the overarching themes, to ascertain what specific aspects of the data each theme encapsulated. By situating the themes within the theoretical constructs of the framework, the researcher conducted a detailed analysis of each individual theme, exploring the narrative each theme conveyed and considering how it integrated into the broader "story" relevant to the research questions (Braun & Clarke, 2006).

Each theme should maintain a clear focus, avoiding excessive diversity or complexity, and minimizing overlap with other themes. The organization should yield a coherent narrative, with each theme titled using a concise and impactful phrase that effectively conveys its essence to the reader (Braun & Clarke, 2006).

Upon establishing a comprehensive set of themes, the analysis and report prepared in Step 6 will present a concise, coherent, and logically structured narrative that avoids repetition and engages the reader. This report will furnish robust evidence to substantiate the identified themes within the data. (Braun & Clarke, 2006).

3.4.6 Ensuring Trustworthiness

To ensure the trustworthiness of the thematic analysis, several strategies were adopted. Member checking was conducted by sharing selected transcripts and interpreted themes with participants for verification and feedback, enhancing the credibility of the findings (Lincoln & Guba, 1985). In addition, triangulation was achieved by comparing themes across multiple participants to identify consistent patterns and minimize researcher bias. A transparent coding process, along with reflexive memo writing, contributed to dependability and confirmability. These steps strengthen the overall rigor of the qualitative analysis. (Nowell et al., 2017; Braun &

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Clarke, 2006)

3.5 Content Analysis in Literature Reviews

3.5.1 The Guiding Analytical Framework of Content Analysis

The literature review serves as the backbone of nearly every academic article. It constitutes a significant academic contribution by mapping, consolidating, and advancing the theoretical framework within a specific research field, thereby facilitating the foundation for subsequent studies (Fink, 2019). Literature reviews assist in narrowing the research topic and provide a rationale for the research objectives, overall design, and methods employed. Furthermore, they contextualize novel research findings within the existing body of literature, allowing for the confirmation, rejection, comparison, and enhancement of prior research outcomes (Seuring & Gold, 2012).

Over the past two decades, technology has significantly transformed the modes of communication. In the era of "big data," the methodological techniques of content analysis have emerged as a powerful tool in a researcher's arsenal (Stemler, 2015). The primary data source for content analysis remains written text (Krippendorff, 2018). This method facilitates a systematic, transparent, and flexible approach to literature reviews (Seuring & Gold, 2012). The dual advantage of content analysis lies in its application of statistical methods to analyze the explicit content of texts and documents while simultaneously mining the latent content to elucidate the underlying meanings of terms and arguments, thereby offering significant insights for researchers (Duriau, Reger & Pfarrer, 2007).

This article conducted a content analysis following the four steps outlined by Seuring and Gold (2012), framed within the study's conceptual framework to ensure theoretical alignment. Step 1 involved delineating the material for analysis and defining the unit of analysis, guided by constructs related to the benefits of conducting skills for

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collaborative pianists. Step 2 assessed the formal characteristics of the material, establishing connections between its attributes and the framework's theoretical constructs. Step 3 focused on selecting structural dimensions and analytic categories shaped by the framework, ensuring alignment with core research questions and constructs such as auditory discrimination, orchestration skills, and interpersonal skills.

Finally, Step 4 analyzed the material according to these dimensions, yielding findings that were both data-driven and theoretically grounded. The results validated the hypothesis that conducting skills are beneficial for collaborative piano performance and were compared with the thematic analysis derived from the interview data. This integration provided a cohesive narrative and deeper insights into the interplay between conducting skills and collaborative piano performance.

3.5.2 Preparation Stage: Material Collection

During the material collection phase, two primary decisions must be made: the definition and delineation of the material, as well as the specification of the unit of analysis. Complete sampling is infrequently achievable and is most commonly observed when conducting keyword searches within a database. This study addresses two interdisciplinary topics, collaborative piano and conducting, where literature obtained through keyword searches is applicable and can be further supplemented by cross-referencing additional publications (Seuring & Gold, 2012).

The inclusion criteria for this study comprised literature published in English-language journals over a 20-year period, from 2003 to 2023, as well as textbooks on collaborative piano and conducting. At this stage, the researcher formulated the analysis outline based on the three research questions, with the analysis unit defined as the relevant literature and corresponding chapters from the three textbooks. Maintaining consistency in the analysis units throughout the analytical process is essential (Mayring, 2008).

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3.5.3 Coding Stage: Descriptive analysis

At this stage, the text data was systematically encoded in accordance with the established analysis outline. This process involved assigning text fragments to predefined encodings or categories for subsequent statistical analysis (Seuring & Gold, 2012). To ensure accuracy and consistency in the coding process, the researchers implemented a coding consistency check among multiple researchers or conducted repeated reviews of the data (Beske et al., 2009).

3.5.4 Analysis Stage: Category Selection

In developing the category pattern for analysis, the primary decision lies between inductive and deductive category construction (Mayring, 2008). Given that the objective of the content analysis in this study is to verify the hypothesis that conducting skills are beneficial to collaborative piano and to compare the findings with the thematic analysis of the interview data, deductive construction is more appropriate. In deductive construction, the researcher pre-formulates categories or topics based on existing theories or research hypotheses and employs content analysis of the literature to assess whether these categories or topics are supported. This approach facilitates a deeper understanding and interpretation of the research findings within the literature (Beske et al., 2009). The material is gradually refined and concentrated.

During the analysis stage, the researcher first explored the encoded data to identify patterns and relationships among topics or categories. This process involved examining the frequency of occurrence and exploring the correlations between different viewpoints. Subsequently, qualitative analysis was conducted to gain a deeper understanding of the meanings and content underlying the codes, as well as to identify the themes and categories of findings and elucidate their significance in relation to the research questions. The results of both statistical and qualitative analyses were synthesized to present comprehensive conclusions and explanations, addressing the

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research questions and exploring the implications for theoretical or practical inquiries (Seuring & Gold, 2012)

3.5.5 Reporting Stage: Material Evaluation

In this stage, the researcher produced a report based on the results of the analysis, clearly outlining the main findings of the study design and analysis process. The report explained the significance of the findings, discussed the limitations, insights, and potential generalizations, and compared the results with those of the thematic analysis derived from the interview data (Seuring & Gold, 2012).

Thorough documentation of the entire research process ensures transparency and reproducibility of the results. Incorporating actual literature citations and data fragments in the report to substantiate the findings of the analysis enhances the validity and credibility of the results (Duriau et al., 2007).

3.6 Ethical Concerns

This study has been approved the Research Ethics Clearance Application through the Universiti Malaya Research Ethics Committee (UMREC). And this study will be conducted in accordance with the Universiti Malaya Research Ethics Guidelines.

Participants were informed of the purpose of the study and provided with a Participant Information Sheet and a Consent Form in accordance with the Universiti Malaya Research Ethics Guidelines. They were made aware that their participation was entirely voluntary and had the option to use their real names when introducing themselves in the study. Given that the interviewees were highly qualified collaborative pianists and experts in their fields, the use of their real names in participant introductions enhanced the credibility of the conclusions drawn from the research.

During data collection, the data of all participants were encoded, and the real names of participants were not stored with the data. Personal identities and any

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information relating to interviewees were not disclosed during the analysis and reporting process. The data were collected through an encrypted online survey platform that was password-protected, with access to the raw data limited to researchers and supervisors to ensure its security.

Another ethical consideration that the authors adhered to was ensuring that participants were not coerced into participating in the study. Accordingly, participants were provided with the opportunity to review the study at any time and were given the option to withdraw at any time and for any reason (Tracy, 2024). The authors committed to reporting the results of the study accurately and impartially, taking special care to ensure that no harm of any kind was inflicted on the participants at any stage of the study, and to avoid any form of deception regarding the study's objectives (Creswell & Poth, 2016).

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CHAPTER 4

ANALYSIS

4.1 Introduction

This chapter presents the findings from qualitative interviews conducted with collaborative pianists regarding their perceptions of the benefits associated with acquiring conducting skills. Grounded in the study's conceptual framework, the primary focus is on three key competencies: auditory discrimination, orchestration, and interpersonal skills.

After iterative comparison and refinement, the researcher defined and named each theme, highlighting its essence and relevance to the study's narrative. A coding tree was created to visualize the relationships and hierarchies among themes, clarifying their connection to the research questions and ensuring alignment with the framework. The coding tree is shown in Figure 4.1.

This chapter provides a thorough analysis of the participants' responses according to the identified themes. Each section delves into the pianists' insights on how these skills, as framed by the conceptual framework, enhance their collaborative piano abilities, specifically addressing complex issues such as intonation, balance, and color in musical performance. By synthesizing the qualitative data collected and aligning it with the framework, this chapter seeks to elucidate the perceived advantages of these skills from the perspective of collaborative pianists, thereby laying a foundation for the discussion in Chapter 5.

Figure 4.1

Coding Tree

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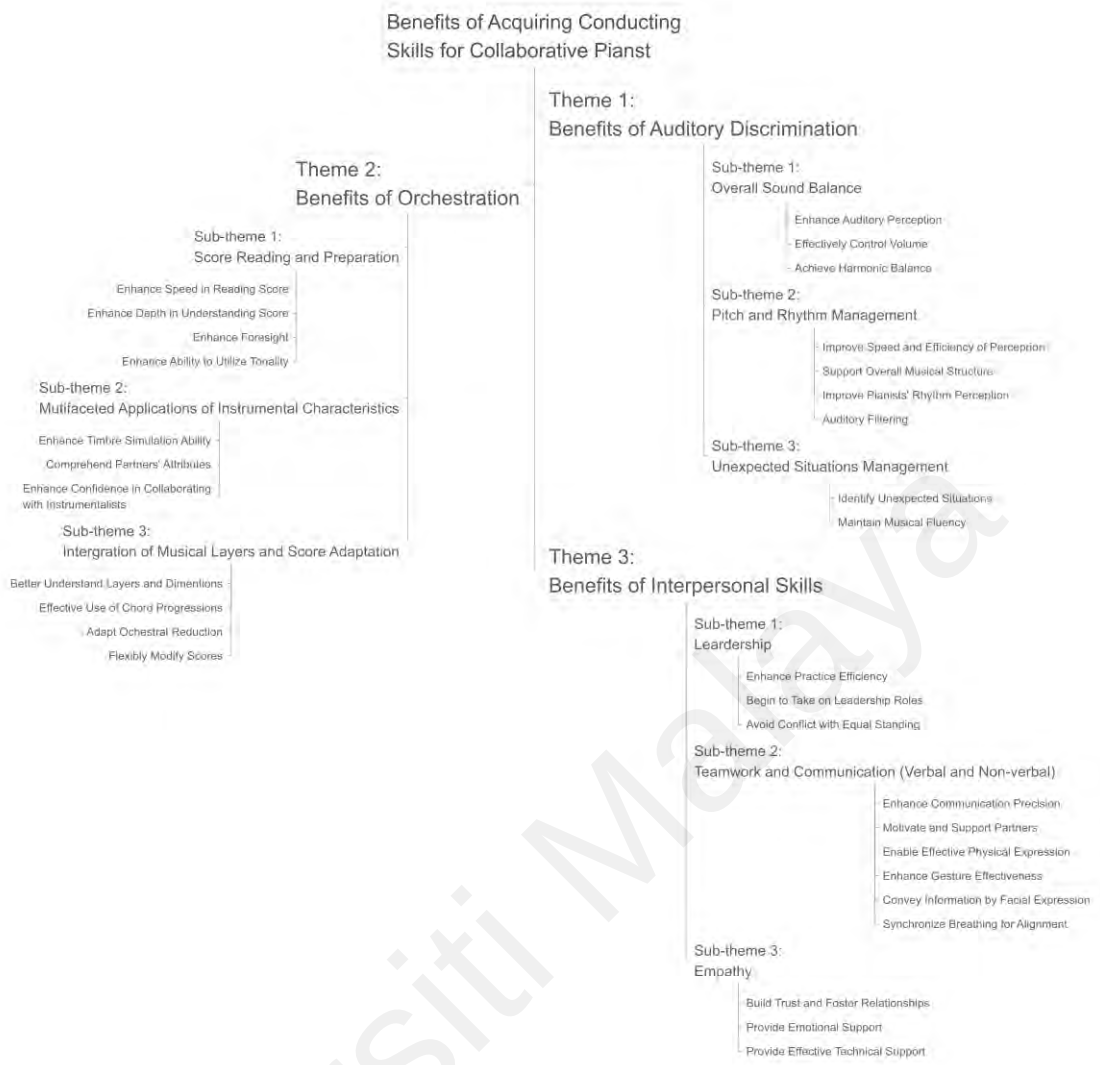

4.2 Theme 1: Benefits of Auditory Discrimination

This theme encompasses three sub-themes: Overall Sound Balance, Pitch and Rhythm Management, and Unexpected Situations Management. It also emphasizes the benefits that the collaborative pianist derives from acquiring auditory discrimination, particularly how this skill enables them to solve complex musical problems and respond flexibly to a range of situations within a dynamic musical environment.

4.2.1 Overall Sound Balance

Auditory discrimination enables the collaborative pianist to more effectively

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perceive the sound of the partner and assess whether the overall balance of the performance is achieved. Interviewee 2 explained, “Conductors tend to excel in listening to others because they themselves do not produce sound. The practice of conducting enables him to more effectively hear the voices of others and the overall ensemble, rather than concentrating solely on his own part.” Interviewee 1 stated, “The term ‘discrimination’ aptly describes the auditory requirements for conducting and collaborative piano. One must listen not only to individual parts but to the entirety of the performance.” Interviewee 5 asserts that musical practice is an ongoing process of striving for balance, and an exemplary performance reflects the successful realization of that balance.

The ability to engage in auditory discrimination and adjust volume levels enables collaborative pianists to achieve a harmonious blend with their partners, ensuring that no single part overpowers the ensemble and that each part fulfills its role effectively. Interviewee 4 emphasized, “Auditory discrimination helps him actively listen to his partners' dynamics, timbre, and rhythm, which enables flexible adjustments, maintains effective coordination, and ensures consistency in the overall sound.” Interviewee 2 explained that musical collaboration requires each performer to fulfill their role, and active listening is essential for collaborative pianists to achieve balance. He noted that adjustments must be made to all parts, not just one, to maintain a consonant sound. Interviewee 1 remarked, “The ability to distinguish volume levels has heightened my awareness of how my playing influences the overall sound.”

The balance of the overall sound, in addition to volume control, also encompasses three-dimensional harmony. Interviewee 5 stated, “Choosing a reasonable chord progression is crucial; the piano part often supports other instruments effectively through simple and expressive chords. Overly complex harmonies can create confusion in the overall sound. Auditory discrimination enhances my ability to focus on harmonic

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balance." Interviewee 4 noted that the rich timbre and sound of the symphony orchestra provided him with a sense of stereo depth, in contrast to the flatter sound typically experienced in a duo setting as a collaborative pianist.

4.2.2 Pitch and Rhythm Management

The interviewees concurred that a conductor's auditory discrimination is more complex than that of a collaborative pianist. The auditory discrimination developed through conducting serves as valuable training for collaborative pianists, enabling them to more effectively and quickly perceive changes in pitch and rhythm from their partners. Interviewee 2 stated, "onductors engage with a variety of instruments simultaneously, including strings, woodwinds, brass, and percussion, with different timbres corresponding to distinct pitches." Interviewee 5 further elaborated, "Conductors must manage multiple musicians and musical parts at once, necessitating a heightened sense of hearing. As a result, after acquiring conducting skills, I have developed a stronger auditory awareness. This has enhanced my perception of pitch and rhythm in subsequent musical collaborations, making it more intuitive and comprehensive."

Understanding and managing pitch variations and rhythmic accuracy enables pianists to maintain intonation and pacing, thereby effectively supporting the overall musical structure. Interviewee 5 asserted, "The ability to develop auditory discrimination enhances my attentiveness to the pitch and rhythm of my partners. This skill allows me to adjust her playing to maintain stable intonation and rhythm, thereby effectively supporting and advancing the overall structure and development of the musical work, contributing to a more cohesive and fluid performance." Interviewee 1 contended that the performance of collaborative piano is not solely independent but also integrates with the contributions of partners to create a harmonious overall effect that meets the demands of the work.

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Notably, Interviewees 3 and 5 contend that auditory discrimination plays a crucial role in improving a pianist's perception of rhythm, which is vital for effective collaboration. They argue that inaccurate rhythm can result in a lack of synchronization with a partner, potentially disrupting the cohesion of the performance. Interviewee 3 noted that collaborative pianists who began their piano studies at an early age often develop a fixed sense of pitch but may exhibit lower sensitivity to rhythmic nuances. The auditory discrimination skills acquired through conducting enable her to simultaneously engage with multiple voices and comprehend the rhythmic counterpoint of each part. This skill allows her to better synchronize with and adapt to the rhythm of her partner during collaboration, ensuring a cohesive rhythmic performance.

Interestingly, Interviewee 4 remarked, "Learning the auditory discrimination skills associated with conducting enhanced his ability to resist interference when perceiving pitch and rhythm." He employed MIDI software as an analogy: when practicing piano independently, he primarily hears his own voice, akin to a monorail experience. In contrast, conducting resembles the task of identifying the pitch and rhythm of a single track within a multi-track musical composition. After acquiring conducting skills, he described it as if his auditory perception had been broadened, enabling him to listen to multiple tracks simultaneously or focus on a single track, seamlessly switching between them.

4.2.3 Unexpected Situations Management

All interviewees emphasized that the capacity to manage unexpected situations, such as errors made by their partners or sudden changes, begins with the ability to discern these occurrences within the music. Interviewee 1 remarked that it is challenging for collaborative pianists to adapt in real-time based on what they hear. Similarly, Interviewee 2 emphasized that the timely identification of issues is crucial. Interviewee 3 stated, "To address emergencies, one must first be able to perceive them.

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This perception is achieved through the ear." Additionally, Interviewees 4 and 5 reiterated that their training in the auditory discrimination skills associated with conducting has enhanced their ability to better perceive their partner's voice and detect changes in rhythm. This heightened awareness enables them to quickly identify unexpected situations.

It is noteworthy that when confronted with unexpected situations during a performance, the interviewees are able to swiftly adjust their playing to maintain overall musical fluency, a skill closely linked to the conductor's ability to arrange music effectively. Interviewee 5 noted that when her partner inadvertently began to sing at a slower pace, she adapted her piano part by transforming the original broken chord into a block chord on each beat, thereby assisting her partner in regaining the original tempo. This adjustment not only reflects her collaborative experience but also her understanding of orchestration principles.

4.3 Theme 2: Benefits of Orchestration

This theme encompasses three sub-themes: Score Reading and Preparation, Multifaceted Applications of Instrumental Characteristics, and Integration of Musical Layers and Score Adaptation. It explores the benefits that collaborative pianists gain from their understanding of orchestral music, with a focus on how knowledge of orchestral theory enhances their ability to interpret and perform music within an ensemble context.

4.3.1 Score Reading and Preparation

All interviewees concurred that learning orchestration significantly enhanced their speed in reading score. Interviewee 5 indicated, "Orchestration enabled her to simultaneously read multiple lines and more complex scores, leading to improved speed when analyzing collaborative piano scores." Interviewee 3 asserted that learning

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orchestration enhances the comprehensive musical abilities of collaborative pianists, fostering a deeper understanding of harmony and music structure, as well as a better grasp of detailed rhythmic processing and counterpoint. This enhancement not only accelerates reading speed but also broadens the depth of music score comprehension.

Additionally, Interviewee 1 stated, "Learning orchestration allows me to grasp the logic of conducting when reading music scores and provides a more holistic perspective. In addition to focusing on the melodic lines, I also pay attention to the harmonic and counterpoint aspects and their interrelationships. This approach enables me to extract more information from the score in less time."

Learning orchestration enables collaborative pianists to achieve a deeper understanding of the score and to extract more information from it. Interviewee 4 noted, "A deeper understanding of harmony, melody, rhythm, and the overall structure of a musical work enhances collaborative pianists' comprehension of the score." This knowledge enables them to accompany their partners more effectively and to design appropriate accompaniments. Additionally, it bolsters the pianist's improvisational skills, allowing for flexible and spontaneous adaptations while reading music scores, thereby preserving the vitality of their performance. Interviewee 2 stated, "Learning orchestration has provided me with a deeper understanding of harmony and overall acoustics, which has increased my comfort with improvisation. By adjusting the number of sounds—either subtracting or adding certain elements—I am able to create a more effective musical effect."

Orchestration assist collaborative pianists in adopting a more proactive approach to score reading, which is essential for anticipating the direction and changes in the playing of other musicians. Interviewee 1 indicated that during the preparation phase, she actively considers potential issues that may arise during rehearsal and how to address them. For instance, when collaborating with a choir or vocalists, she

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contemplates areas where her partners might experience pitch-related difficulties and how she can provide tonal cues on the piano to guide them. Interviewee 2 similarly stated, “I anticipate what my partner will think and do.”

A novel aspect is that Interviewee 2 indicated, “Learning orchestration enhanced my ability to utilize tonality. The instruments in the orchestral score are transposed in different keys, necessitating quick transposition skills when reading score.” Moreover, reading complex key signatures can be expedited; for instance, in a performance with limited rehearsal time, Interviewee 2 leveraged his extensive knowledge of orchestration to substitute for another pianist. He successfully sight-read while collaborating with a trombone player on a piece in G-flat major (six flats) .

4.3.2 Multifaceted Applications of Instrumental Characteristics

Each interviewee emphasized the significant benefits of orchestration in enhancing their understanding of the timbre, range, and sound patterns of various instruments, which facilitated their ability to simulate the timbre of other instruments. Interviewee 3 stated that this knowledge provided her with greater opportunities to experiment with different timbral combinations and playing styles. Similarly, Interviewee 4 noted that learning orchestration allowed him to make more informed choices regarding the selection of appropriate chords and timbres in accompaniment, thereby enhancing the overall expressiveness of the performance.

An understanding of instrumental characteristic also aids collaborative pianists in comprehending the attributes of their partners. Interviewee 3 remarked, “I can understand how challenging it is for wind musicians to complete long phrases in a single breath. They must consider their breathing technique as well as the continuity of their performance.” Interviewee 2 specifically noted that the performance of brass instruments is influenced by the condition of the facial muscles and lips. To achieve more refined techniques, musicians may occasionally employ more extreme pitch notes,

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which can be affected by fatigue in the lips and impact overall performance. During performances, he pays particular attention to phrases that pose challenges for his partners. And Interviewee 4 noted that this understanding facilitates a more collaborative and harmonious working relationship with instrumentalists.

Furthermore, understanding the instrumental characteristics also enhances the collaborative pianist's confidence when working with instrumentalists. Interviewee 4 indicated a particular proficiency in collaborating with vocalists and choirs, stating, "Before learning orchestration, I had no knowledge of other instruments, and I did not even feel confident working with instrumentalists." Interviewee 2 emphasized that without conducting experience, even a specific understanding of an instrument can result in relatively one-sided knowledge. He noted that orchestration provide a more holistic perspective, such as categorizing instruments into different groups and pitch ranges, as well as understanding the role of each instrument within the overall musical structure. This comprehensive understanding has strengthened his confidence in collaborating effectively with instrumentalists and in conveying the emotional depth of his performances.

4.3.3 Integration of Musical Layers and Score Adaptation

Learning orchestration enables collaborative pianists to better understand the layers and dimensions of musical compositions. Interviewee 3 noted, "Collaborative pianists typically work with two lines from their own piano score and one line from their partner's score." The complexity of the conductor's score has helped her recognize the three-dimensionality of music, which encompassing pitch in treble, midrange, and bass, as well as the various instrumental groups, including strings, woodwinds, brass, and percussion. Similarly, Interviewee 2 reflected that early in his career, he focused primarily on melody and the right hand, believing it necessary to play loudly. However, after learning orchestration, he recognizes that the overall sound is three-dimensional,

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with harmony serving as a crucial element in shaping this complexity. Each part plays a distinct role, and therefore cannot be generalized. Interviewee 4 expressed, “Learning orchestration has provided me with a more comprehensive perspective on harmonic structures, particularly regarding harmonic counterpoint, which allows for a richer interpretation of the music.”

By exploring the layers of music and understanding the principles of harmony, collaborative pianists can more effectively apply chord progressions and enhance their comprehension of a piece’s overall structure and hierarchy. Interviewee 3 remarked, “Melody is the easiest level for pianists to recognize and remember, and is at the heart of musical emotional expression. However, the harmony above or below the melody enriches the overall sound and influences the tone and depth of the music.” Interviewee 5 noted that she developed a deeper understanding of vertical harmonic hierarchy, shifting her focus from solely horizontal harmonic progression. She began to consider the concept of vertical sound, contemplating how, in an orchestra, each note of a chord would be assigned to a specific instrument and the role it would play within the ensemble. Interviewee 2 highlighted that, from the conductor’s perspective, even simple block chords contain melodic lines, with each part serving a distinct function; the root note also plays a crucial role in supporting the overall sound. In an orchestra, different parts may vary in volume, and on the piano, achieving uniform force across a chord is challenging. While it is difficult to play multiple notes at different volumes with one hand, it is feasible when focusing exclusively on melodic or bass notes.

Collaborative pianists are often tasked with performing orchestral reduction, and to adapt these scores for piano while achieving optimal acoustics, they frequently need to make appropriate arrangements. Interviewee 2 remarked, “I modify reductions almost at any time. I have to change it when I encounter a problem.” He noted that orchestral reductions are originally adaptations, and the arrangers consider numerous

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factors, such as preserving as many elements as possible, which can be challenging and may require the pianist to modify or simplify passages according to their own abilities. Interviewee 3 also pointed out that some reductions lack the qualities of piano music. For instance, in Mozart's Serenade, string players often utilize glissandi to connect notes, a technique that is difficult to replicate on the piano. This effect can be translated into legato phrasing, employing pedal techniques to simulate the smoothness of the glissando. Similarly, the intricate percussion rhythms in Stravinsky's *Rite of Spring* may require simplification or reorganization to better suit piano performance while preserving the overall rhythmic integrity of the work.

In addition to orchestral adaptations, collaborative pianists must possess the ability to flexibly modify scores to meet the needs of their partners in various performance environments. Interviewee 5 highlighted that the management of unexpected situations is a comprehensive process. She first identifies unexpected situations through auditory discrimination and subsequently employs her knowledge of orchestration to make necessary adaptations, aligning her part with her partners' requirements.

4.4 Theme 3: Benefits of Interpersonal Skills

This theme encompasses three sub-themes: Leadership, Teamwork and Communication (Verbal and Non-verbal), and Empathy. It explores the benefits that collaborative pianists gain from developing interpersonal skills through conducting, emphasizing how these skills contribute to enhancing their effectiveness within an ensemble setting.

4.4.1 Leadership

Interviewees concurred that leadership skills are essential for collaborative

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pianists, as they enhance practice efficiency and ensure consistency during performances. Interviewee 3 noted, “When a collaborative pianist is expected to take the lead, a failure to do so can impede the efficiency of practice.” Interviewee 4 emphasized that collaborative pianists bear the responsibility of coaching their partners, particularly when those partners are new to collaboration and require guidance. Interviewee 2 stated, “Sometimes we do not have time for extensive discussion. If an unexpected situation arises on stage, the most important thing is to keep going. As a collaborative pianist capable of reading the full score, one must assume the responsibility of leading the group.”

Most interviewees agreed that they did not fully recognize the importance of leadership until they had acquired the interpersonal skills associated with conducting. It was only after gaining these skills that they began to take on leadership roles in musical collaborations when appropriate. Interviewee 2 noted, “After studying conducting, I realized that collaboration alone was insufficient, and that leadership could significantly streamline the process when needed.” Interviewee 1 explained, “I now make clear and specific demands of my partners.” Interviewee 3 shared that she had been reluctant to assume a leadership role prior to studying conducting, as she had never attempted it and had been overly focused on maintaining an equal relationship with her partners. Similarly, Interviewee 5 remarked that leadership is a more proactive skill; before learning conducting, she had been relatively passive, often responding with “all right, all right” in various situations.

It is noteworthy that the interviewees expressed divergent views regarding the relationship between leadership and equal collaboration. Most interviewees agreed that while collaborative pianists require leadership, this does not conflict with their equal standing in the collaboration. Interviewee 2 posited that differing ideas and approaches in collaboration necessitate a unifying figure. He stated that when his partner is capable

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of leading the group, he is willing to follow, as the primary objective is to achieve a cohesive performance as efficiently as possible. Both Interviewees 3 and 4 emphasized that the leadership exercised by a collaborative pianist should not be perceived as controlling or demanding complete obedience; rather, it involves providing guidance and support to enhance a partner's performance. Interviewee 5 asserted, "Effective leaders articulate a clear vision and facilitate collective progress toward that goal." Conversely, Interviewee 1 maintained that a conductor's leadership is more authoritative, and this authority may influence her interactions with partners as a collaborative pianist. This perspective may be related to her experiences and learning environment, which will be explored in greater detail in Chapter 5.

4.4.2 Teamwork and Communication (Verbal and Non-verbal)

Most interviewees emphasized that the interpersonal skills of conductors enhance collaborative pianists' verbal communication, making it more concise and accurate. Interviewee 1 noted that conductors must address dozens or even hundreds of individuals simultaneously, requiring them to convey their requirements swiftly and effectively. This demands precise expression; otherwise, musicians may interpret different signals, leading to confusion. Interviewee 3 connected this to leadership, stating that a leader's communication must be clear and succinct. As she learned to take on a leadership role, she began to articulate specific requirements clearly, which helped her identify, raise, and resolve issues promptly, ultimately improving her work efficiency.

Interviewee 5 further emphasized, "The interpersonal skills of conductors enable them to motivate and support their partners effectively, thereby enhancing team spirit." Following her studies in conducting, she gained a deeper understanding of various instruments and became more attuned to her partners' needs. This newfound knowledge improved her ability to encourage her colleagues. When her partners

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encounter difficulties, she engages more actively in communication and provides constructive feedback, significantly enhancing team cohesion.

All interviewees agreed that learning conducting greatly improved their non-verbal communication skills, allowing for more effective physical expression. Interviewee 2 noted that conductors excel at conveying ideas through gestures rather than words, which enhances efficiency and reduces the need for lengthy discussions. Non-verbal cues and body language enable real-time communication during practice, helping partners quickly understand what needs to be done. Interviewee 5 emphasized that non-verbal communication is essential, stating, "The most helpful aspect is non-verbal communication, as conducting relies fundamentally on this." Interviewee 2 shared that after learning conducting, his gestures became more expressive, often conveying intentions with just a look or movement. His students even joked that he might be a dancer. Interviewee 3 highlighted the importance of non-verbal cues, especially on stage. Interviewee 1 recalled that her non-verbal communication was minimal before studying conducting, but after learning, she realized the importance of exaggerated gestures to capture attention. "Conducting has really helped me express myself freely," she said.

The non-verbal communication employed by conductors, such as gestures and conducting patterns, enhances the collaborative pianist's ability to effectively convey messages through physical movement, thereby improving the efficiency of collaboration. Interviewee 5 highlighted, "Conductors employ different patterns for various beats. Before learning conducting techniques, I used a single beat to communicate rhythm, but after learning conducting patterns, I realized each beat has a distinct direction, making her communication clearer." Consequently, even a simple gesture, like a wave, conveys specific direction, which her partners find reassuring. Interviewee 2 emphasized the need for concise and accurate downbeats; otherwise,

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musicians may struggle to find the starting point, leading to confusion. He noted that learning effective downbeats allowed him to express himself more clearly during performances and synchronize better with his partner. Interviewee 1 added, “It is crucial to convey precisely what you intend through body language to avoid misinterpretation.”

Facial expressions play a crucial role in conveying information. Notably, both Interviewee 1 and 4 highlighted the significance of “raising eyebrows”. Interviewee 1 asserted that although collaborative pianists are engaged with their own tasks involving both hands and feet, they can effectively communicate through their expressions and eye contact. She observed an interesting phenomenon as a choral conductor: when the pitch of the choir was lower, particularly during sustained notes, raising her eyebrows seemed to prompt a return to pitch. Interviewee 4 recounted an instance in which, while collaborating with a partner, the latter accidentally missed their entry. In response, he modified the piano part to provide his partner with an opportunity to re-enter, simultaneously adopting an exaggerated facial expression of raised eyebrows and pronounced breathing to signal the re-entry.

All the Interviewees emphasized the significance of synchronized breathing, which serves as an effective means for collaborative pianists to align with their partners. Throughout the collaborative process, breathing facilitates a deeper understanding of the partner’s intentions and actions. It also functions as a critical cue at the onset of collaboration or when partners need to enter the music. Interviewee 1 noted, “Breathing is particularly essential when working with choirs and vocalists; a shared glance and simultaneous breath at the beginning of a phrase helps ensure that collaborative pianists remain in sync with their partners.”

4.4.3 Empathy

Empathy and goodwill in interpersonal interactions are essential for building

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trust with partners, fostering stronger relationships, and enhancing teamwork. Interviewee 2 highlighted the significance of emotional resonance, stating, “The more you understand your partner, his instrument, his profession, his skills, the more secure and trusting they will feel.” Interviewee 3 emphasized that mutual understanding is a critical condition for fostering a collaborative relationship. Collaboration involves more than just discussing the work, skills, or technical aspects; empathy helps create deeper emotional connections, enhance team cohesion, and cultivate a more harmonious working environment. Interviewee 5 shared an experience from her time in the choir, where she realized that sometimes, simply conveying understanding was more effective than offering technical support. She observed that while trust and mutual understanding develop through consistent practice and shared experience, an expression of “I understand you” can often be more impactful than any technical advice.

Empathy enables collaborative pianists to offer emotional support to their partners, thereby enhancing morale and motivation. When partners feel understood and supported, they are more likely to engage fully in the collaborative process. Interviewee 3 shared an example in which, during a collaboration, her violin partner encountered technical difficulties and became anxious. In response, she reassured him, saying, “I also played the violin as a child, and I understand how difficult it is to play this passage with fourth finger. Take your time, it’s okay.” Her partner immediately felt that his struggles were acknowledged. Interviewee 5 initially believed that technical proficiency alone would allow her to overcome any challenges as a collaborative pianist. However, after studying conducting, she realized that psychology plays a crucial role in collaboration. She reflected that it is not enough to rely solely on technical skills; one must avoid becoming a cold, impersonal “machine”. A simple expression of understanding or a few encouraging words from a collaborative pianist can help ease a partner’s anxiety, boost their motivation, and resolve potential conflicts.

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Empathy fosters a deeper understanding between collaborative pianists and their partners, enabling the pianist to provide more effective technical support and ultimately improve the overall quality of collaboration. When individuals are able to empathize with each other's emotions and perspectives, discussions become more constructive, and the collaborative process becomes more efficient. This understanding is also closely linked to the collaborative pianist's knowledge of orchestration. Interviewee 5 explained, "It is through learning orchestration that I am able to better understand my instrumental partner, which leads to more meaningful and productive communication." For instance, when her wind instrument partner struggled to complete a long phrase in a single breath, she suggested a strategic breathing point that aligned with the piano part. This suggestion not only addressed her partner's breathing needs but also created a seamless integration with the piano, demonstrating effective collaboration.

Interestingly, while the majority of interviewees believed that the development of interpersonal skills through conducting enhanced their ability to cultivate empathy, Interviewee 1 disagreed. She argued that her empathy was primarily developed through her study of collaborative piano, and that her capacity for empathy as a collaborative pianist gave her an advantage over other instrumentalists when learning conducting, ultimately making her a more effective conductor. Interviewee 3, on the other hand, acknowledged that empathy is essential in all musical collaborations but suggested that collaborative pianists and conductors, due to their close interaction with other musicians, are more likely to develop a heightened sense of empathy.

4.5 A Discussion of Thematic Analysis and Content Analysis

This section presents a synthesis of the findings from the thematic analysis and

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the content analysis of the literature, integrating the two to provide a deeper understanding of the benefits collaborative pianists perceive from acquiring conducting skills. By combining both sources of data, this section highlights the commonalities and contrasts between the interviewees' perspectives and the existing literature. The synthesis is organized around three key themes: Auditory Discrimination, Orchestration, and Interpersonal Skills, as identified in the previous sections.

4.5.1 Auditory Discrimination

According to the interviewees, during the performance, the collaborative pianist is able to flexibly adjust their playing in response to the auditory effects in the environment, as well as to the performance and emotional expressions of other musicians, thereby guiding the overall performance towards achieving a balanced sound. Throughout the ensemble, the pianist makes prompt adjustments based on immediate feedback from partners, such as altering tempo, volume, or playing style, in order to maintain coordination within the group and facilitate effective musical communication and collaboration. When faced with unexpected situations, such as mistakes or sudden changes by other musicians, the pianist can quickly adapt their performance to ensure the overall musical fluency.

Although there is no literature that directly addresses how the auditory discrimination of conductors influences pianists, existing research on the interaction between collaborative pianists and ensemble performance indicates that active listening provides significant benefits for collaborative pianists, particularly in the areas of pitch and rhythm perception, ensemble coordination, and responsiveness to unexpected situations (Van Zyl & Cupido, 2021; Lee, 2016; Katz, 2009; Hoekman, 2004).

Furthermore, studies on the auditory discernment of conductors suggest that conductors possess heightened auditory abilities, enabling them to detect sounds,

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respond to unforeseen circumstances, and make necessary adjustments (Browning, 2022; Koivunen, 2008; Ulrich, 1993). These findings provide indirect support for the interviewees' assertion that conducting training enhances pianists' sensitivity to the musical environment, facilitates the management of pitch and rhythm, improves their ability to respond to dynamic fluctuations, and equips them to effectively address unexpected musical challenges.

4.5.2 Orchestration

According to the interviewees, during performances, collaborative pianists apply their knowledge of orchestration by thoroughly analyzing the score to discern the roles and nuances of each instrument within the ensemble. They prepare their parts in a way that complements the overall texture, ensuring that each instrument's contribution is effectively highlighted and that all parts work cohesively within the broader structure. By understanding the unique characteristics of different instruments, the pianist can make informed decisions about voicing, texture, and dynamics, thereby enhancing the overall sound of the performance. Furthermore, an understanding of musical layers enables the pianist to navigate the relationships between parts within the ensemble, facilitating quick adjustments in response to dynamic changes or shifts in roles, and ensuring a harmonious and well-coordinated performance.

Although no studies directly address the specific benefits of orchestration knowledge for collaborative pianists, existing literature on orchestral understanding, score reading, and ensemble coordination provides indirect support for this topic. Browning (2022) and Katz (2009) noted that learning orchestration enhances pianists' sensitivity to various musical elements, such as different instrumental parts, rhythms, timbres, and the range, technical characteristics, and expressive qualities of each instrument. This, in turn, improves their ability to interpret music and engage more effectively with other instruments. Van Zyl and Cupido (2021) and Koivunen (2008)

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emphasized how collaborative pianists apply their understanding of orchestration in ensemble settings to optimize their performance, thereby contributing to the overall sonic balance.

Additionally, Ulrich (1993) suggested that a pianist's knowledge of orchestration facilitates better coordination and enables them to provide more effective support to other performers within the ensemble. These findings further corroborate the interviewees' perspectives regarding the role of knowledge of orchestration and instrumental characteristics in enhancing pianists' ability to read and interpret music. Such knowledge enables them to approach the score with a broader, more informed perspective, thereby facilitating more effective decision-making during ensemble performances.

4.5.3 Interpersonal Skills

According to the interviewees, leadership highlights the collaborative pianist's role as a coach, allowing them to guide the ensemble, make informed decisions, and shape the overall musical direction through a deep understanding of the sheet music. Teamwork and effective communication, both verbal and non-verbal, are crucial for ensuring smooth coordination and fostering a shared artistic vision among musicians. Empathy enables the collaborative pianist to understand the emotions and intentions of other musicians, strengthening their ability to connect on a personal level and enhancing the collaborative process, which in turn leads to more expressive and meaningful performances.

However, within the discussion of interpersonal skills, the views of the interviewees were divergent. The majority of participants acknowledged that acquiring the interpersonal skills associated with conducting, such as leadership, teamwork, communication, and empathy, had been beneficial to their work as collaborative pianists. In contrast, Interviewee 4 argued that his leadership and communication skills

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were primarily developed through extensive experience in collaborative piano. This discrepancy may stem from his more theoretical experience with conducting, which was less grounded in practical application. He maintained that, with sufficient practical experience and empathy, a collaborative pianist could develop the interpersonal skills required for effective collaboration without the need for conducting training. And Interviewee 1 noted that while she had indeed gained leadership and communication skills from studying conducting, her empathy was primarily cultivated through her work as a collaborative pianist. She further argued that her pre-existing empathy as a collaborative pianist provided her with an advantage over other musicians in learning conducting.

Currently, direct research on the influence of conductors' interpersonal skills on collaborative pianists remains relatively limited, with most studies focusing on broader aspects of ensemble coordination, communication, and teamwork in the context of conducting. However, some studies have indirectly examined the impact of conducting skills on the performance of collaborative pianists. Although these studies do not explicitly address the specific concept of "interpersonal skills", they do explore related competencies such as communication, coordination, and leadership. For example, Browning (2022) investigates how conducting skills can enhance pianists' interactions with other ensemble members, involving key interpersonal abilities such as listening, understanding, and responding to their partners' performances. Similarly, Van Zyl and Cupido (2021) emphasized that conducting skills enable pianists to better understand the roles and relationships of individual parts within an ensemble, which is closely linked to effective interpersonal communication and collaboration. Katz (2009) explores musicians' teamwork and communication skills, noting that learning to conduct can strengthen these abilities and improve overall teamwork effectiveness.

Additionally, Lee (2016) and Koivunen & Wennes (2011) highlighted that

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conducting training enhances collaboration and coordination, particularly through non-verbal communication (such as body language and conducting gestures), which is vital for successful ensemble performance.

While these studies and the interviewees' views underscore the importance of interpersonal skills in musical collaboration, it is worth noting that empathy, specifically, was not explicitly discussed in the literature. However, the concept of emotional resonance and the ability to understand and respond to the needs of fellow musicians—key aspects of empathy—were mentioned indirectly. As Lee (2016) pointed out, conducting fosters emotional resonance and improves a musician's ability to connect with other performers, which aligns with the interviewees' assertions that their ability to empathize with fellow musicians was enhanced through conducting training.

4.5.4 Conclusion

The findings from both the interview data and the literature suggest that conducting training provides significant benefits to collaborative pianists in multiple areas: auditory discrimination, orchestration, and interpersonal skills. While the literature does not always directly address the impact of conducting on collaborative pianists, it consistently supports the notion that conducting skills enhance musicians' technical abilities, communication, and coordination within an ensemble. The interview data further corroborate these findings, highlighting how conducting training can lead to more effective collaboration, improved leadership, and heightened empathy. These combined findings provide a comprehensive understanding of how conducting skills contribute to the development of collaborative pianists, both in terms of musical competence and interpersonal dynamics.

CHAPTER 5

DISCUSSION AND CONCLUSIONS

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5.1 Introduction

This chapter provides an overview of the findings, situates them within the broader context of collaborative piano pedagogy, and explores their implications for practice and future research. This chapter is structured to include a discussion of the research's key findings, the limitations identified during the study, and recommendations for future exploration. The chapter concludes with a summary that underscores the significance of integrating conducting skills into collaborative piano training and highlights the potential for further advancement in this interdisciplinary field.

By revisiting the main themes identified in the analysis—auditory discrimination, orchestration, and interpersonal skills—this chapter contextualizes their relevance to collaborative pianists' professional development. It also reflects on the broader impact of these findings on music education and performance practices. Through this discussion, the study aims to provide a comprehensive understanding of the ways in which conducting skills can enhance the versatility, adaptability, and artistry of collaborative pianists in diverse musical settings.

5.2 Summary of the Key Findings

The study examined collaborative pianists' perceptions of the benefits of acquiring conducting skills and identified three key themes to answer the research questions: auditory discrimination, arranging, and interpersonal skills.

5.2.1 Research Question 1: What are Collaborative Pianists' Perceptions on Benefits of Acquiring Auditory Discrimination in Conducting Skills?

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The participants reported significant improvements in auditory discrimination, particularly in overall sound balance, pitch and rhythm management, and responding to unexpected situations. These findings support previous research, which indicates that conducting training enhances musicians' sensitivity to the musical environment, improving adaptability and facilitating smoother ensemble collaboration. The skills gained from conducting helped participants develop a heightened awareness of musical nuances, further enhancing their responsiveness in ensemble settings.

In section 2.4.2, Active Listening of Collaborative Pianists, it is emphasized that achieving balance in musical collaboration requires collaborative pianists to shift their focus from their own playing to engaging with their partners (Lee, 2016). Effective listening skills are crucial for collaborative pianists, who are generally required to possess a higher level of auditory proficiency than many other musicians (Katz, 2009). Moreover, they must provide constructive feedback on both specific areas for improvement and broader aspects of the performance as a whole (Hoekman, 2004). Similarly, in section 2.4.3, Auditory Discrimination of Conductors, it is noted that a conductor must cultivate a highly developed sense of auditory discrimination, enabling them to distinguish the individual contributions of up to 100 musicians in a full orchestra (Koivunen & Wennes, 2011). This aligns with the perspectives of the interviewees. Notably, the auditory discrimination highlighted by interviewee 4 enhances his ability to focus on harmonic balance, offering a unique and valuable perspective.

As discussed in Section 2.4.2, Active Listening of Collaborative Pianists, collaborative pianists are required to possess enhanced auditory abilities to discern subtle nuances of sound and color, which aid in supporting soloists (Van Zyl & Cupido, 2021; Browning, 2022). Similarly, in Section 2.4.3, Auditory Discrimination of Conductors, it is highlighted that a conductor's heightened auditory sensitivity is crucial

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for identifying tonal inaccuracies and maintaining proper balance within the ensemble. The initial stages of rehearsal typically focus on ensuring accurate pitch and rhythm (Koivunen, 2008; Ulrich, 1993). This aligns with the respondents' observations regarding the benefits of employing more refined auditory discrimination in the management of pitch and rhythm. Notably, Interviewees 3 and 5 placed particular emphasis on the role of auditory discrimination in helping pianists perceive and regulate rhythm, offering a potentially novel perspective on this aspect of pianists practice.

In Section 2.4.2, Active Listening of Collaborative Pianists, it is highlighted that pianists must respond to unpredictable situations through active listening, quick recognition, and prompt reaction during performances, thereby assisting their partners (Lee, 2016; Katz, 2009). Similarly, in Section 2.4.3, Auditory Discrimination of Conductors, it is emphasized that conductors must actively listen to a musician's performance and possess the ability to detect errors in order to steer the sound in the desired direction (Biasutti, 2013; Koivunen & Wennes, 2011). This aligns with the interviewees' assertion that the ability to recognize issues in a timely manner is critical for managing emergencies, and that auditory discrimination significantly enhances collaborative pianists' capacity to address such challenges.

5.2.2 Research Question 2: What are Collaborative Pianists' Perceptions on Benefits of Acquiring Orchestration in Conducting Skills?

In terms of orchestration, participants emphasized how knowledge of orchestration and instrumental characteristics improved their score reading and interpretation, leading to better decision-making during ensemble performances. Orchestration enables individuals to gain a deeper understanding of the score, particularly in terms of tonal relationships, harmonic structure, and musical hierarchy. It also facilitates the integration of instrumental timbre and texture, enhancing their ability

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to interpret complex scores and adapt effectively during performances. They also noted the ability to apply these skills in real-time, adjusting piano parts during rehearsals to improve both accuracy and expressiveness. These findings align with previous research, which suggests that conducting training provides a broader, more informed perspective on music (Browning, 2022; Van Zyl & Cupido, 2021).

In Section 2.5.1, Previous Preparation: Reading Music from Scores, noted that both collaborative pianists and conductors, with access to full scores, are required to maintain an overarching control of the performance (Seuteu, 2021; Koivunen & Wennes, 2011). Furthermore, possessing a comprehensive knowledge of orchestration enables collaborative pianists to make more informed and flexible decisions during performance (Lee, 2016; Katz, 2009; Sellers, 2003). This aligns with the interviewees' assertion that studying orchestration enhances their score-reading speed and deepens their interpretative abilities. Browning (2022) and Koivunen (2008) also emphasize the importance of orchestration in helping musicians anticipate the direction and changes in the performance of other players when interpreting scores, which indirectly supports the views of Interviewees 1 and 2, who indicated that learning musical arrangements has allowed them to approach score reading with a more forward-looking perspective.

In Sections 2.5.3 Mimicking the Timbre of Different Instruments on Piano and 2.5.4 Playing Unpianistic Music on Piano, the numerous benefits of learning orchestration for collaborative pianists are highlighted, including enhanced awareness of timbre and texture, the ability to mimic the timbral and emotional qualities of individual instruments, the creative use of orchestral colors, and the ability to adapt musical arrangements to make piano parts more pianistic (Browning, 2022b; Shiuteu, 2021; Van Zyl & Cupido, 2021; Lee, 2016; Katz, 2009; Sellers, 2003). While these scholars did not directly focus on this specific topic, their findings indirectly support the value and application of orchestration for collaborative pianists, particularly in the context of

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Multifaceted Applications of Instrumental Characteristics. This benefit is consistently emphasized across the literature.

Several scholars have examined the benefits of orchestration knowledge for collaborative pianists in the interpretation and handling of multipart musical layers. These benefits include a deeper understanding of the coordination and interaction between different parts, enhanced comprehension of ensemble structure, improved adaptability to musical scores, and the ability to ensure clarity and harmony in musical layers (Browning, 2022; Li, 2016; Koivunen & Wennes, 2011; Katz, 2009; Sellers, 2003). Additionally, Van Zyl and Cupido (2021) emphasize that knowledge of orchestration enables pianists to better understand the functional roles of various parts within a score. This perspective is consistent with the views expressed by the interviewees. Furthermore, as discussed in Sections 2.5.2 Playing Orchestral Reductions on Piano and 2.5.4 Playing Unpianistic Music on Piano, learning orchestration helps collaborative pianists adapt orchestral reductions and flexibly adjust scores for piano parts (Browning, 2022b; Van Zyl & Cupido, 2021; Garrett, 2018; Lee, 2016; Katz, 2009).

5.2.3 Research Question 3: What are Collaborative Pianists' Perceptions on Benefits of Acquiring Interpersonal Skills in Conducting Skills?

The most significant area of benefit was related to interpersonal skills, particularly in leadership, teamwork and communication, and empathy. Interviewees highlighted that conducting training helped them take on leadership roles in ensemble settings and communicate more effectively with both verbal and non-verbal cues. These non-verbal communication skills, such as gestures and body language, allowed for more seamless coordination within the group, reducing the reliance on verbal communication. Furthermore, several interviewees mentioned that conducting training enhanced their empathy, enabling them to better understand and respond to the

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emotional and musical needs of other ensemble members.

Studies by Browning (2022), Van Zyl & Cupido (2021), and Katz (2009) explore how conducting skills can enhance the leadership abilities of pianists and other musicians within an ensemble. However, none of these studies explicitly address the impact of 'interpersonal skills' on collaborative pianists. Koivunen & Wennes (2011) specifically emphasize the role of conducting training in improving nonverbal communication, which in turn enhances pianists' ability to interact effectively with other musicians, indirectly influencing their leadership capabilities. Collectively, these studies provide indirect support for the interviewees' perspective that leadership is crucial for collaborative pianists to improve their practice efficiency, and that learning conducting skills enables them to recognize the importance of leadership and actively engage in leadership roles.

Koivunen and Wennes (2011) emphasize the role of conducting training in enhancing musicians' non-verbal communication skills within musical collaboration. Specifically, they highlight how non-verbal cues, such as body language and conducting gestures, facilitate seamless coordination among ensemble members. Similarly, Browning (2022), Van Zyl and Cupido (2021), and Katz (2009) underscore the importance of conducting skills in improving both verbal and non-verbal communication, which enhances the overall effectiveness of collaboration. Lee (2016) further discusses how conducting training enhances non-verbal communication, enabling musicians, particularly pianists, to better understand and anticipate the needs of their fellow performers. Although these studies do not directly examine the impact of conducting training on collaborative pianists, they collectively highlight how conducting skills contribute to improved communication and coordination within an ensemble. This, in turn, fosters more efficient collaboration and a deeper understanding among musicians, thereby exerting positive, indirect effects on the practice and

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performance of collaborative pianists.

Browning (2022), Van Zyl & Cupido (2021), Koivunen & Wennes (2011), and Katz (2009) all highlight how conducting skills enhance a musician's ability to understand and relate to other members of an ensemble. Lee (2016) also discusses the role of emotional resonance in musical collaboration. However, none of these studies explicitly mention the concept of "empathy". In the existing literature, the discussion of conducting skills—particularly interpersonal skills—within the context of empathy in collaborative pianists remains indirect. Most research has focused on how conducting improves musicians' communication, coordination, and leadership abilities. Nevertheless, their exploration of how conducting skills foster emotional and interactive understanding among musicians can be seen as indirectly related to empathy, thereby providing support for the respondents' views.

5.2.4 The Novel Finding: Empathy in Collaborative Pianists

This study reveals that empathy plays a crucial role in fostering effective collaboration between collaborative pianists and their partners. While existing literature on conducting training emphasizes communication, coordination, and leadership skills, the concept of empathy itself has not been explicitly discussed, especially in the context of collaborative pianists. However, the interviewees consistently highlighted the significance of empathy in their collaborative relationships, demonstrating its direct impact on team dynamics and the quality of collaboration.

Interviewee 2 assessed that emotional resonance fosters trust and security between collaborators, with a deep understanding of each partner's instrument, profession, and skills leading to a more trusting and supportive partnership. This aligns with the findings of Lee (2016), who discussed the role of emotional resonance in fostering strong interpersonal connections during musical collaborations. While empathy is not explicitly mentioned in the existing research, the concept of emotional

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resonance and mutual understanding, key aspects of empathy, are implicitly acknowledged.

Interestingly, while the majority of interviewees in this study believed that conducting training enhanced their ability to develop empathy, Interviewee 1 offered a unique perspective. She argued that her capacity for empathy was initially developed through her study of collaborative piano, and that it was this pre-existing empathy that enabled her to excel in conducting. This perspective suggests that collaborative pianists may have a distinct advantage when developing empathy in music-related contexts, given their close, ongoing interaction with other musicians. Moreover, Interviewee 3 supported this view, emphasizing that while empathy is essential in all musical collaborations, collaborative pianists and conductors, due to their close interaction with musicians, are particularly adept at cultivating a heightened sense of empathy.

The integration of conducting skills into the collaborative pianist's repertoire, as described by several interviewees, provides a broader and more informed perspective on orchestration and emotional interaction. The knowledge of orchestration allowed collaborative pianists to better understand their instrumental partner's needs, thus improving the effectiveness of their technical support. This ability to empathize with a partner's emotional and technical challenges fosters more productive communication and a smoother collaborative process. Conducting skills enhance musicians' capacity to understand and relate to other ensemble members (Browning, 2022; Van Zyl & Cupido, 2021). However, these studies did not explicitly frame this ability in terms of empathy, despite acknowledging the importance of emotional understanding in musical interactions.

Thus, while existing literature has indirectly highlighted the benefits of interpersonal skills of conducting, this study introduces empathy as a critical

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component that contributes to the success of musical collaborations. The participants' experiences suggest that empathy allows collaborative pianists to respond more effectively to the emotional and technical needs of their partners, thereby improving the overall quality of the collaboration. This finding extends the existing body of research by emphasizing the psychological and emotional dimensions of collaboration, areas that have not been fully explored in the literature on conducting training and its impact on musicians' interpersonal skills.

In conclusion, while empathy has not been explicitly identified in previous studies on conducting training, its role in enhancing collaboration is evident in the experiences shared by the participants in this study. Empathy plays a significant role in fostering trust, improving communication, and providing emotional support, all of which are crucial for successful musical collaboration. Future research may benefit from exploring empathy as a distinct, measurable skill in conducting and collaborative piano training, and its impact on ensemble dynamics and performance outcomes.

5.3 Interconnections Among Three Theme in Musical Collaboration

5.3.1 Interconnection Between Auditory Discrimination and Orchestration

The three themes identified in this study are interrelated, collectively highlighting the comprehensive benefits of acquiring conducting skills for collaborative pianists. While each theme holds individual significance, they are also deeply interconnected, with one influencing and reinforcing the others in the context of collaborative performance. This section primarily focuses on the interconnection between auditory discrimination and orchestration.

One of the most significant relationships identified in this study was between auditory discrimination and orchestration. Participants consistently reported that

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conducting training enhanced their ability to perceive and manage the overall sound balance in ensemble settings. As pianists became more attuned to the subtleties of sound balance, they were better equipped to interpret complex scores and understand the roles of various instruments within the ensemble. This heightened auditory awareness, central to auditory discrimination, also deepened their understanding of orchestration. For example, interviewees described how a greater sensitivity to instrumental timbres and textures enabled them to adjust their playing to better blend with other instruments.

This finding aligns with existing research suggesting that conducting training sharpens musicians' overall listening skills, enhancing their ability to interpret and adapt to the nuances of the music in real time (Browning, 2022; Van Zyl & Cupido, 2021). Conducting also enhances tonal awareness and harmonic structures, which allows collaborative pianists to interpret scores more accurately and anticipate the needs of other instrumentalists. This integration of auditory skills and orchestral knowledge is critical for ensuring that collaborative pianists can navigate complex musical landscapes and make real-time decisions during performances.

5.3.2 The Role of Interpersonal Skills Throughout Musical Collaboration

Another significant interrelationship observed in this study was between interpersonal skills, including empathy, and the development of auditory discrimination and orchestration skills. Interpersonal skills are not confined to a particular stage of musical collaboration, but rather play a continuous and essential role throughout the entire collaborative process. From initial rehearsals to the final performance, these skills are integral to the effectiveness and success of the ensemble, guiding musicians in their communication, coordination, and emotional interactions.

In this study, participants emphasized that interpersonal skills were crucial not only during technical preparation but also throughout the rehearsal and performance

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phases. Interviewees consistently highlighted that effective communication, the ability to read emotional cues, and offering emotional support were essential for maintaining a productive and harmonious environment across the entire collaborative process. Interviewee 3 particularly stressed that no skill, especially interpersonal skills, is used in isolation throughout musical collaboration. As Browning (2022) asserts, conducting training helps musicians refine their communication skills, which are vital at every stage of ensemble work. Collaborative pianists, in particular, are constantly engaged in both verbal and non-verbal interactions with their partners, navigating through varying musical ideas while simultaneously maintaining strong interpersonal connections.

Moreover, participants also emphasized how interpersonal skills were key to maintaining a constructive and trusting environment throughout multiple rehearsals and performances, viewing this as an ongoing process. Interviewee 5 shared an example where, in several rehearsals, she applied both her interpersonal skills and knowledge of auditory discrimination and orchestration to help her partner resolve various technical issues, gradually building a strong working relationship. Koivunen and Wennes (2011) underscore that conducting is not only about musical leadership but also about establishing trust and rapport within the ensemble. This trust develops over time and is nurtured through continuous emotional engagement, fostering a positive atmosphere for musical collaboration. Lee (2016) similarly notes that conducting encourages ongoing emotional resonance among musicians, strengthening the interpersonal bonds that underpin long-term collaboration. Interpersonal skills are not a one-time necessity but a continuous thread woven through every phase of the collaborative process.

5.4 In-Depth Exploration of Findings

5.4.1 The Integration of Musical and Collaborative Skills

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The three key conducting abilities—auditory discrimination, orchestration knowledge, and interpersonal skills—play a synergistic role in benefiting collaborative pianists, enhancing both their musical expertise and collaborative abilities. The participants consistently emphasized that these skills do not operate in isolation; rather, they are interdependent and enhance both the musical and interpersonal dimensions of collaboration.

All interviewees agreed that auditory discrimination and orchestration are essential musical skills, while interpersonal skills are crucial for collaboration. Interviewee 3 offered the two key components of a collaborative pianist's expertise: musical and collaborative skills. The former includes technical proficiency, repertoire knowledge, improvisation, and abilities such as auditory discrimination, harmonic understanding, and contextual awareness of a piece. Collaborative skills, on the other hand, involve teamwork, communication, adaptability, and emotional resonance. A collaborative pianist must possess solid technical skills, adaptability to diverse musical styles, and the ability to convey emotion through performance. In addition, keen auditory perception—such as the ability to detect changes in timbre, dynamics, and rhythm from other instruments—is essential, as is the flexibility to improvise and adjust to the partner's performance. Quick and accurate music reading, a deep understanding of complex rhythms and harmonies, and strong communication skills for fostering collaboration are also vital.

Auditory discrimination and orchestration knowledge are critical for collaborative pianists, enabling them to navigate complex scores and understand the roles of other instruments in an ensemble. Research has shown that strong listening skills, including the ability to discern timbre, dynamics, and rhythmic variations, are essential for effective interaction and response to partners in ensemble settings (Koivunen & Wennes, 2011). These musical abilities not only enhance a pianist’s

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interpretative skills but also foster a more nuanced approach to collaboration (Lee, 2016). In addition to musical proficiency, interpersonal skills, such as communication, empathy, and emotional resonance, are crucial for creating a harmonious and productive environment in ensemble settings. It has been demonstrated that facilitating interpersonal interactions contributes significantly to effective collaboration and the development of strong working relationships within teams (Browning, 2022; Van Zyl & Cupido, 2021). Conducting training, for example, has been shown to enhance a musician's ability to communicate and adapt to the dynamic nature of group performance, further emphasizing the importance of both musical and interpersonal skills in collaborative musicianship.

The integration of musical and collaborative abilities fosters a holistic approach to musical collaboration. As participants noted, the capacity to adapt to varying musical and interpersonal contexts is a defining characteristic of effective collaboration. This comprehensive skill set equips the collaborative pianist to contribute significantly to the ensemble's success, ensuring both technical accuracy and emotional cohesion throughout the performance.

5.4.2 The Integration of Practical and Theoretical Insights

A novel aspect of this study is the identification by interviewees of the dual nature of the skills required for effective collaboration among collaborative pianists, distinguishing between those that are primarily theoretical and those that are more practical in nature. The integration of these two skill sets is essential for collaborative pianists, and this section will examine how the interview findings both support and extend existing theoretical frameworks, while also offering practical insights into music literacy and music education.

All interviewees concurred that auditory discrimination and interpersonal skills are primarily acquired through practical experience, while orchestration pertains more

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to the acquisition of theoretical knowledge. Interviewee 5 specifically distinguished between ‘ability’ and ‘knowledge’, using the term ‘ability’ to refer to auditory discrimination and ‘knowledge’ to describe orchestration. She explained that orchestration encompasses a wide range of music theory concepts, including harmony, musical form, and the arrangement of various instruments, all of which are highly practical and provide a solid theoretical foundation for musical practice. Auditory discrimination, by contrast, is an ability that is developed through practice. The abilities acquired through practice, such as auditory discrimination and interpersonal skills, are developed through sufficient practical experience in collaborative piano. In contrast, orchestration knowledge is primarily acquired through theoretical study, which cannot be gained solely through practical experience.

Although orchestration is grounded in theoretical knowledge, it serves as a bridge between theory and practice within the ensemble context. The application of orchestration knowledge in real-time performance involves balancing textures, managing harmonic structures, and understanding the role of each instrument in the overall sound. This underscores the necessity of integrating both theoretical and practical elements of music in a collaborative environment. Collaborative pianists must first engage in active listening, then adjust their performance based on their knowledge of orchestration, while also employing interpersonal skills to effectively communicate with their partners. Interviewee 4 identifies as a pragmatist, emphasizing that his extensive practical experience in collaborative piano, particularly in auditory discrimination and interpersonal skills, has been profoundly enriched through the study of orchestral music and conducting. The training of collaborative pianists requires not only mastery of musical techniques and theoretical knowledge, such as harmony, orchestration, and form analysis, but also the ability to apply these theories in performance, particularly in ensemble settings. This integration of theory and practice

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enables pianists to better understand and respond to the sounds of other instruments, thereby enhancing collaborative effectiveness (Lee, 2016).

Without sufficient practical experience, a collaborative pianist cannot fully develop the auditory discrimination and interpersonal skills essential for effective performance. The respondents in this study indicated that while knowledge of orchestration provides a foundational framework for decision-making, it is auditory discrimination and interpersonal skills that enable pianists to respond to the evolving dynamics of musical collaboration and adapt to the real-time demands of performance. The primary objective of musical collaboration is to achieve optimal acoustics, which is intrinsically linked to the ability to listen attentively. The integral role of interpersonal relationships in collaboration highlights the importance of effective communication in achieving optimal outcomes in collaborative performance.

Interviewee 5 suggested that the integration of theoretical knowledge (orchestration) and practical experience (auditory discrimination and interpersonal skills) constitutes the foundation of effective collaborative performance. Both elements are indispensable; theoretical knowledge provides the necessary framework to support practice, while practical experience enables the effective application of theoretical principles. Successful collaboration requires a balanced development of both theoretical knowledge and practical skills, with each reinforcing and advancing the other.

5.4.3 The Interactivity and Immediacy of Music Collaboration

The performance of musical collaboration extends beyond the mere execution of each player's part according to predetermined rules or the written score. It is characterized by continuous change and development, resulting from ongoing interaction, adjustment, response, and occasional improvisation. Interviewee 3 repeatedly mentioned that "Musical collaborative performance is a dynamic process," referring to the fact that, in a collaborative context, the music constantly evolves as

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participants engage, react, and adapt to changing circumstances. Pianists must be able to quickly adapt to changing performance situations, especially when collaborating with various instruments or vocalists. Each collaboration is unique, shaped by the distinct playing styles, emotional engagement, and technical abilities of the performers, which contribute to the dynamic character of each performance (Tomes, 2004).

In a collaborative performance, musicians respond immediately to each other's playing, with adjustments being reciprocal. Interviewee 1 assessed that "Listening to each other" is crucial in any collaboration, as it involves multiple individuals and voices. It is essential for everyone to harmonize, integrate the ensemble, and, most importantly, listen attentively to one another. In her training classes with student choirs or wind orchestras, she dedicates the first half of the rehearsal to practicing basic long-note scales. This exercise allows students to listen not only to their own voices but also to the collective sound of the group, facilitating adjustments in pitch and volume. This interactive performance process requires constant communication and feedback, both with the music itself and with fellow performers, as well as with the audience. Music, she argued, is not merely a technical representation; it is also an expression of emotion and personality, which performers continuously adjust in response to the environment and the ongoing interaction with others.

This suggests that collaborative performances are characterized by immediacy, flexibility, and constant interaction, which makes each performance unique. Even in familiar pieces, each performance may differ due to the emotional input or the interaction between the performers at that particular moment. As a result, elements such as rhythm, dynamics, and timbre can be adjusted in real time in response to each other's playing, contributing to the dynamic nature of the performance. This variability is not constant, and no two performances are identical. As mentioned earlier, it is essential for musicians to listen attentively to their collaborators and adjust their own parts to

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complement both the individual performer and the ensemble as a whole. Interviewee 2 recounted an experience in which, during a collaborative performance of Grieg's "In the Hall of the Mountain King" from *Peer Gynt Suite*, he and his partner spontaneously increased the tempo in response to the enthusiastic applause of the audience, creating an impromptu synchronization with the audience's reaction.

Each performer must maintain a high level of coordination and tacit understanding during real-time interactions within a collaborative performance. Interviewee 3 mentioned that the development of this tacit understanding relies on mutual comprehension and adjustment fostered through numerous rehearsals and performances. This understanding is rooted in mutual trust, noting that each instrument has a distinct role within the ensemble. However, it must also function in harmony with the other instruments. The interaction during a performance is frequently coordinated and adjusted through non-verbal communication. This aligns with Huron's (2008) research on the psychological principles of musical performance, which examines how ensemble members adjust their playing by responding to one another, creating a dynamic interaction based on a "shared perception."

5.4.4 Developing a Holistic Musical View through Conducting

In this study, interviewees generally indicated that learning conducting skills helped them develop a more holistic perspective. This perspective extends beyond a focus on the superficial techniques and details of music, facilitating a deeper understanding of the entire musical performance, including both the performance process and the interactions within it. Interviewee 1 offered the concept of 'holism' suggests a comprehensive and profound approach, emphasizing the importance of not only considering individual components, but also understanding the interactions and influences between them. Furthermore, problem analysis is approached in a comprehensive manner, considering multiple dimensions.

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The auditory discrimination developed through conducting skills enables the collaborative pianist to adopt a more holistic perspective on the overall sound. Interviewees consistently emphasized that conducting training helped them realize their responsibility not only for the piano accompaniment but also for the overall acoustics of the performance. They noted that attention should not be focused solely on the melody, as harmony plays a crucial supporting role. Collaborative pianists must be acutely aware of the overall structure of the music and the performance of other musicians, balancing elements such as volume, rhythm, and emotional expression in the dynamic context of a live performance to ensure cohesive acoustic harmony (Koivunen & Wennes, 2011).

The process of learning conducting enables the collaborative pianist to develop a more comprehensive interpretation of the score. A conductor must not only understand the melody, rhythm, and harmony of a piece, but also grasp the function and dynamics of each voice part. It is essential not only to master the details of the work, but also to understand and regulate the relationships between the various parts of the orchestra or ensemble (Ulrich, 2009). Through conducting training, collaborative pianists learn to analyze not only their own part but also the parts of their collaborators from a global perspective, thereby fostering a deeper sense of hierarchy and expressivity in their performance. As Interviewee 5 noted, studying conducting enabled him to discern the role of each instrument in the overall work in greater detail, allowing him to imitate the sound of each instrument from a holistic perspective while performing.

5.4.5 The Similarities Between Collaborative Piano and Conducting

Although no scholars or musicians have explicitly asserted the similarities

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between collaborative piano and conducting, many have addressed the commonalities between the two in their discussions. These include aspects such as roles, leadership, communication, and other shared attributes. All interviewees unanimously acknowledged the similarities between collaborative piano and conducting.

The university where Interviewee 2 teaches has assigned the "Art Direction" major to the Conducting Teaching and Research Department rather than the Piano Teaching and Research Department. This decision reflects the recognition that collaborative piano, as an emerging discipline, aligns more closely with conducting. Both collaborative pianists and conductors function as versatile professionals, often working under time constraints and relying on a broad and robust knowledge base. Their expertise spans theoretical subjects and practical skills, including solfeggio, harmony, composition, and music history. A broader and deeper scope of knowledge enhances their ability to address unexpected challenges effectively. Consequently, the teaching of collaborative piano is increasingly adopting an integrated and comprehensive approach.

Both the collaborative pianists and the conductors hold the unique position of having access to the full score in an ensemble, making them responsible for the overall structure of the work, the cohesion of the sound, and fidelity to the composer's intentions. A collaborative pianist must possess a keen awareness of the interplay between the piano and other instruments, skillfully balancing dynamics, phrasing, and timing to support and enhance the ensemble's performance (Katz,2009). Similarly, the conductor oversees the coordination of the various sections of the orchestra, shaping the interpretation of individual parts while ensuring a unified and cohesive realization of the work (Ulrich, 2009).

Both collaborative pianists and conductors require a higher level of auditory skills and knowledge of arrangement. These are highly comprehensive professions that

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demand a broader knowledge base and skill set. Interviewee 2 mentioned that while other musicians primarily focus on improving their individual performance skills, a strong overall ability is essential for collaborative piano and conducting; otherwise, it is nearly impossible to perform their duties. Conductors and collaborative pianists work with more people and manage more layers of sound than other musicians, which challenges their ability to listen attentively and respond to changes effectively.

Collaborative pianists and conductors operate in a highly collaborative environment, whereas other musicians typically perform more as soloists and, when they do collaborate, often focus primarily on their own parts. In contrast, both the collaborative pianists and conductors must remain attuned to the performances of others, requiring a heightened awareness and consideration of their colleagues. Interviewee 4 mentioned that it is necessitates a greater emphasis on communication and empathy, as their cooperation involves not only understanding their own role but also comprehending the perspectives and needs of others.

5.5 Implications for Collaborative Piano Training

5.5.1 Emphasizing the Learning of Conducting Skills

This study demonstrates that conducting skills, encompassing auditory discrimination, orchestration, and interpersonal skills, offer significant benefits to collaborative pianists. Mastery of conducting skills equips collaborative pianists with a deeper understanding of musical structure, enhanced collaboration abilities, and stronger leadership skills in both rehearsal and performance contexts. The integration of conducting skills into collaborative piano training can substantially enhance a pianist's professional versatility and effectiveness within ensemble settings.

To achieve this integration, specific strategies can be implemented. An in-depth study of orchestration improves overall musical quality, broadens the depth and breadth

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of score reading, and enables the practice of orchestra reductions and simulating the timbre of other instruments. Creating an orchestral or choral environment for collaborative pianists encourages them to think and react like conductors, enhancing their auditory discrimination and interpersonal skills through practical experience, while also accumulating valuable expertise in managing unexpected situations. Learning the basic conducting skills, such as beat patterns, rhythm management, and gestures, helps improve the effectiveness of non-verbal communication. Providing students with the opportunity to lead rehearsals in a controlled environment, such as with a small orchestra or chamber ensemble, fosters the confidence needed to lead a team and effectively identify and solve performance problems. It is important to note that, as discussed in 5.3.1 The Integration of Musical and Collaborative Skills and 5.3.2 The Integration of Practical and Theoretical Insights, this integrated approach to training collaborative pianists enables them to fully develop their abilities.

5.5.2 Promoting a Holistic Perspective

Promoting a holistic perspective in collaborative piano training is essential for developing a comprehensive understanding of music, particularly in ensemble settings. A collaborative pianist must be able to perceive and integrate all parts of a musical performance, rather than focusing solely on their own part. This broader view is critical in achieving a cohesive sound within the ensemble and enhancing the pianist's ability to support other musicians effectively. By cultivating a holistic perspective, one can more effectively balance the timbre, dynamics, and musical expression of the ensemble.

Each interviewee highlighted that learning to conduct expanded their holistic perspective across all aspects of music, and offered strategies to help cultivate this holistic viewpoint. Students are encouraged to develop advanced score reading skills, enabling them to analyze and interpret complex orchestral or choral scores. This includes understanding the roles, functions, and hierarchical relationships of different

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instruments and musical parts, which contributes to a more balanced and cohesive overall performance. In practical exercises, students are urged to listen discriminatively and respond adaptively to partners, considering the overall sounds of the ensemble. This heightened awareness of the group dynamic allows for adjustments that promote a unified and integrated musical interpretation.

5.5.3 Encouraging Instrumental Timbre Simulation

Encouraging the simulation of instrumental timbres in collaborative piano training is crucial for helping pianists develop a more versatile and expressive approach to accompaniment. By learning to replicate the timbre of different instruments, collaborative pianists can more effectively support other musicians and contribute to a more cohesive and dynamic ensemble performance. This skill enhances the pianist's ability to adapt their playing to the unique tonal characteristics of various instruments, facilitating better communication and interaction within the ensemble.

Several strategies can be implemented to foster the simulation of instrumental timbres: Collaborative pianists must develop an understanding of the distinctive characteristics of various instruments, including their range, tone quality, articulation, and phrasing techniques specific to strings, woodwinds, brass, and percussion. In practice, this understanding can be applied by modifying dynamics, articulation, touch, pedal, and other expressive elements to mimic or enhance the timbre of the instruments being accompanied. This skill enhances the pianist's adaptability and versatility, enabling them to respond effectively in diverse performance contexts.

Each interviewee shared valuable insights on instrument simulation. For violin, pianists should not only reduce the gritty touch and adapt to its warm, expressive qualities but also consider the violin's role, the emotions the composer aims to convey, and the intended effect. When performing orchestral reductions, pianists should aim to replicate the timbre and characteristics of the original instruments; while in piano

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compositions, they should choose instruments to simulate based on melody range and style, with multiple possibilities, as seen in cases where cello and trombone share a melody in orchestral settings. Instrumental imitation involves not just timbre but also the verve and essence of the instrument and its performer, requiring pianists to imagine themselves playing the instrument. Interviewees emphasized that learning orchestration enhances understanding of each instrument's role: strings require attention to bowing techniques like long bows, staccato, or pizzicato; a woodwind player typically performs their part individually, which differs significantly from the collective playing experience of string players; bass woodwind produces a rich, resonant tone but lacks the agility and flexibility characteristic of higher-pitched woodwinds, such as the flute; bright brass section produces a metallic, high-pitched sound, with trumpets evoking the imagery of charging soldiers and midrange trombones embodying the authority of commanding generals. These elements contribute to a vivid and stylistically accurate simulation.

5.6 Limitations and Recommendations for Future Research

While this study provides valuable insights into collaborative pianists' perceptions of the benefits of acquiring conducting skills, several limitations should be acknowledged, along with corresponding recommendations for future research. Acknowledging these limitations provides a foundation for refining future studies and expanding the scope of this research area.

The study involved a limited sample size, with participants drawn from specific professional backgrounds. While their expertise added depth to the findings, the results may not fully represent the broader population of collaborative pianists. Future research should include a larger and more diverse sample, encompassing participants from varied cultural, educational, and institutional contexts, to enhance the generalizability

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of the conclusions.

The qualitative nature of this study relied primarily on thematic analysis of interviews and literature. While this approach facilitated an in-depth exploration of subjective perspectives, it did not allow for quantification or statistical generalization of findings. Future studies could adopt mixed-methods approaches, combining qualitative insights with quantitative analysis, to provide a more comprehensive understanding of the topic.

The focus of the study was primarily on the benefits of acquiring conducting skills. Potential challenges, such as the difficulty of integrating conducting training into existing curricula or its time demands, were not explored in depth. Future research should examine these aspects to provide a balanced perspective and practical insights into implementation.

The impact of contextual differences, such as institutional resources, training environments, and cultural influences, was beyond the scope of this study. Future studies could investigate how such factors affect the perceived value and integration of conducting skills in collaborative piano education.

5.7 Conclusion

This study explored collaborative pianists' perceptions of the benefits of acquiring conducting skills, highlighting their impact on auditory discrimination, orchestration, and interpersonal abilities. Through thematic analysis of interviews and content analysis of literature, the findings reveal that conducting skills enhance collaborative pianists' ability to achieve overall sound balance, manage pitch and rhythm, handle unexpected situations, and interpret complex scores. Furthermore, these skills foster a holistic perspective on music, enabling pianists to understand instrumental roles and simulate timbres effectively. Conducting skills also strengthens

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leadership, teamwork, communication, and empathy, all of which are crucial for successful collaboration in diverse performance settings.

The integration of conducting skills into collaborative piano education not only broadens pianists' professional skillsets but also enhances their adaptability and versatility in various musical environments. This study highlights the transformative potential of conducting skills for collaborative pianists, demonstrating their impact on auditory discrimination, orchestration, and interpersonal abilities. By bridging the gap between conducting and collaborative piano, the research underscores the value of interdisciplinary approaches in fostering well-rounded musicianship. By addressing limitations such as small sample size and qualitative focus, future research can further refine and expand upon these findings, contributing to the development of more comprehensive and effective training programs for collaborative pianists.

The findings contribute to the growing discourse on collaborative piano pedagogy, offering insights that can inform curriculum design and practical training. Despite its limitations, this study lays a foundation for further exploration into the integration of conducting techniques and their broader implications for ensemble collaboration.As music continues to evolve in complexity and diversity, the role of the collaborative pianist demands adaptability, leadership, and a holistic understanding of musical interactions. The integration of conducting skills into their training not only enhances their artistry but also empowers them to navigate the dynamic challenges of modern performance with confidence and creativity.

These findings have important implications for collaborative piano pedagogy, particularly in the context of curriculum development in higher music education. The emphasis on conducting-related skills suggests a need to integrate basic conducting training into collaborative piano programs. Such integration aligns with current educational reforms that advocate for interdisciplinary skill development and the

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breaking down of traditional role boundaries in music education (e.g., musician-conductor integration). Institutions can respond by incorporating modules on gesture, ensemble leadership, and score interpretation into existing collaborative piano curricula, thereby better preparing students for real-world ensemble contexts.

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APPENDICES