

The Art of Systematic Teaching and Professional Development in
Contemporary Piano Learning: An Analysis of the U.S. Music
Certification Exams and Their Pedagogical Purposes

By Teng Fu

Submitted to the graduate degree program in the School of Music and the Graduate Faculty of
the University of Kansas in partial fulfillment of the requirements for the degree of Doctor
of Musical Arts.

Chair: Dr. Scott McBride Smith

Dr. Michael Kirkendoll

Dr. Colin Roust

Dr. Véronique Mathieu

Dr. Kissan Joseph

Date Defended: 16 April, 2018

The dissertation committee for Teng Fu certifies that this is the approved version of the following dissertation:

**The Art of Systematic Teaching and Professional Development in
Contemporary Piano Learning: An Analysis of the U.S. Music
Certification Exams and Their Pedagogical Purposes**

Chair: Dr. Scott McBride Smith

Date Approved: 16 April, 2018

ABSTRACT

The importance of systematic teaching and music pedagogy is beginning to receive recognition around the globe. Piano lessons based on informed, research-based instruction have the potential to provide a common ground between academia and the broader non-professional piano teaching market. With an adequate exam system and training program, the likelihood is strong that a more motivational, engaging and productive learning environment for both amateur and professional musicians is possible; the educational value of the U.S. Music Certification Exams and its instructional books is foreseeable. For any professional or amateur musicians, the key for building self-efficacy and confidence lies in a persistent belief of one's ability to accomplish a variety types of tasks, range from completing daily practice of scales and other technic, to handling stage fright when performing in public. By systematically studying the materials in the 11 levels of U.S. Music Certification Exams, a student will acquire adequate skills in the initial stages of his or her musical development by mastering sufficient technical, musicianship and artistic pieces, drills and exercises. The USMCE examination system also provides a first look at methodically organized western-style piano teaching. This provides opportunities to change and improve general piano instruction in countries such as China where the philosophy of western music education and piano pedagogy are still relatively undeveloped. Students participating in USMCE exams have the opportunity to discover and develop their musical talents to the highest level.

Table of Contents

Abstract.....	iii
Introduction.....	1
History of Music Examinations.....	7
U.S. Music Certification Exams-Description and Examining Issues.....	9
U.S. Music Certification Exams-Teacher Training.....	11
Instructional Books and Their Pedagogical Purposes.....	14
U.S. Music Certification Exams Performance Book Pre-Grade 1-Grade 10.....	34
Conclusion.....	38
Bibliography.....	40

Introduction

The evolution of musical art has been long and adventitious. Whether the art form served for liturgical purposes or was celebrated as an expression of individuality and human intelligence, music has always been a necessary component of human experience. Today, classical music is praised for its pure artistic value, but also for the attractive educational market that is associated with it, especially piano lessons. According to *Statistica--The Statistics Portal*, between 2005 and 2016, 582,299 grand and upright pianos were sold in the U.S., with a combined retail value of \$49,768,400.¹ Every year, thousands of domestic and international students are admitted into Conservatories, Music Schools, and Pre-Colleges around the world to pursue professional or semi-professional activities related to piano. Others, especially privileged members of the younger generation, seek private lessons or attend piano classes at private schools.

A 2014 BBC article suggested that China is the world's largest consumer piano market: it accounts for 76.9 percent of the global piano production output and the number of children learning piano there reached approximately 40 million in 2012.² A *Clavier Companion* article from 2013 pointed out that in China, many parents recognize the piano as a path to a successful life for their children and are willing to make extensive sacrifices, even giving up jobs and spending their entire savings to support music study for children. They may believe that, with hard work and enough sacrifice, their son or daughter will one day become a superstar and pride of the nation, like Lang Lang.³ The article also suggested that due to the cutthroat academic

¹ <https://www.statista.com/statistics/452772/number-of-pianos-sold-in-the-us/>. Accessed 20 October 2017

² Clarissa Sebag Montefiore, "Why Piano-mania Grips China's Children", *BBC*, 21 Oct 2014, <http://www.bbc.com/culture/story/20131022-piano-mania-grips-china>. Accessed 20 October 2017

³ Gulimina Mahamuti, "Piano Study in Twenty-First Century China," *Clavier Companion*, Vol 5, No. 2, March/April 2013, 44-50, http://www.gulimina.com/uploads/6/8/1/4/6814450/_piano_study_in_twenty-first_century_china_clavier_companion_201303-04.pdf, Accessed 26 Nov 2017.

competition in China's school admission process, students have no choice but to fulfill a variety of extracurricular obligations to gain extra credits, including earning certification in piano exams: these activities all have significant impact on schools' admission decisions.⁴ In considering this extensive interest in learning the piano, a question arises: are today's students receiving up-to-date and educationally sound instruction in piano? Many professional music educators would say no.

Research in cognitive psychology has indicated several areas in which piano instruction can improve. Music psychologist Dr. Gary E. McPherson⁵ recognized three components that form a healthy psychological framework for learning: competence, relatedness, and autonomy.⁶ In many cases, students' lack of motivation and 'quitting' lessons can be attributed to teachers' deficiencies of patience and a void of interesting study materials, among other problems.⁷ Appropriate goal-setting is important, too. In the 2015 *Journal of Research in Music Education*, Jennifer Bugos and William Lee's article "Perceptions of Challenge: The Role of Catastrophe Theory in Piano Learning" notes the positive and negative effects regarding "stress" when challenging tasks are given to the student and how non-linear advancement can be achieved by using the proper amount of extra difficulty in pieces and playing at various performance venues such as studio class, public showcases, and music exams to facilitate motivation and technical breakthroughs.⁸ Administering positive stressors to students, with the right timing and level of

⁴ Mahamuti, "Piano Study", 49.

⁵ Gary E. McPherson, Jane W. Davidson, and Robert Faulkner, *Music In Our Lives, Rethinking Musical Ability, Development & Identity*, New York: Oxford University Press, 2012.

⁶ *Competence*- the need to feel effective in one's pursuits and successful in the acquisition and execution of skills. *Relatedness*- the need to feel socially connected and integrated. *Autonomy*- the need to feel that one's activities or pursuits are self-endorsed and self-governed. McPherson, 86.

⁷ McPherson, Davidson, Faulkner, 83-89, 196-199.

⁸ Jennifer Bugos and William Lee. "Perceptions of Challenge: The Role of Catastrophe Theory in Piano Learning." *Music Education Research* 17, no. 3, September 2015, 312-326 Accessed 3 December 2017.

challenge induce stimulation, persistence and reduces practice negatives such as boredom and frustration.⁹

The perceptions of piano teachers themselves reinforce these findings. In a survey of 804 independent teachers affiliated with the Music Teacher National Association, 53% of the instructors agree with the statement “When students experience a significant advance in musical skills in response to significant challenges or stress, the advance is often more of a “jump” rather than simply a gradual increase” and 74% agree “it is my belief that teachers who continuously challenge their students will help their students to develop better performance skills relative to teachers who do not consistently challenge their students”.¹⁰ Instructors with a higher level of education and longer teaching experience show more positive response in their students’ progress with challenging pieces and other assignments, and, in the studios of more experienced teachers, students possess more competent performance skills and abilities to combat performance anxiety. This is attributed to instructor’s application of positive stressors such as using studio class to create simulation of public performances to help students cope with performance anxiety.¹¹

In the early twentieth century, English pianist and pedagogue Tobias Matthay recognized the harmful and insufficient teaching methods of what he called the ‘Old German School’ of piano teaching: lifting the fingers high and knocking the keys to achieve a brilliant sound and improve strength and agility, or the so called ‘deep touch’ obtained by squeezing and putting extra pressure on the fingers in slow passages to create a deeper and thicker sound.¹² He delineated techniques such as rotation, specific forms and speeds of touch, and relaxation to

⁹ Bugos and Lee, “Perception of Challenge”.

¹⁰ Bugos and Lee, “Perception of Challenge”, 316-319.

¹¹ Bugos and Lee, “Perception of Challenge”, 317, 321-322.

¹² Tobias Matthay, *The Visible and Invisible in Pianoforte Technique, Being a Digest of the Author's Technical Teachings up to Date*. London: H. Milford, Oxford University Press, 1932.

improve pianists' understanding of the instrument physiologically and scientifically. Sadly, information based on Matthay's (and others') work has not yet spread wide into the piano teaching marketplace and old-fashioned approaches continue to cause bad habits, injuries and lack of musicality in piano playing.

The need for more experienced music teachers and better teacher training and continuing professional development is critical. The 2014 report of *The Associated Board of the Royal Schools of Music* pointed out that in schools of United Kingdom, initial teacher training and Postgraduate Certificate in Education courses typically provide only eight hours preparation in music teaching.¹³ Music educator Brittany Nixon May addressed the importance of music learning in early childhood education, as effective music teaching supports a child's physical, emotional, social, and cognitive development.¹⁴ Also, music materials may be used to facilitate learning through active interactions between the child and other people.¹⁵ However, lack of proper training and examinations regarding early childhood music education have become increasingly problematic among teachers working in American school system, as May noted in "A Survey of Early Childhood Public School Music in the District of Columbia: Assessing Content and Teacher Preparation"-

With the expansion of public school early childhood programs there is an increased and even urgent need for engagement from music educators, many of who enter the field with a K– 12 teaching certificate and little or no exposure or training in child development. Unprepared public school elementary general music teachers risk underestimating the obstacles surrounding successful classroom practices and the distinction between age groups. In most states (including Washington, DC) elementary school teachers are certified K–12.

¹³ Making Music: Teaching, Learning, & Playing in the UK, A Collaborative Research Project, ABRSM, September 2014, <https://us.abrsm.org/en/making-music/5-behind-the-statistics/> Accessed 1 November 2017.

¹⁴ Brittany Nixon May, "A Survey of Early Childhood Public School Music in the District of Columbia: Assessing Content and Teacher Preparation.", The University of Utah, 2015. <https://search.proquest.com/docview/1690897715?accountid=14556/> Accessed 8 January 2018.

¹⁵ May, "A Survey in the District of Columbia", 13-14.

However, beyond common sense and tangentially relatable 17 pedagogic skills, most teachers tasked with teaching early childhood public school music classes will find themselves without the necessary formal training needed for early childhood classes. Unfortunately, with the extensive amount of training already required for a degree in music education, many programs are not able to provide sufficient exposure in early childhood methodologies. The lack of knowledge results in music teachers who are uncomfortable guiding music instruction for children in their vital early years.¹⁶

A proven tool for improving the standard of piano instruction internationally has been music exams. The 2014 report of *The Associated Board of the Royal Schools of Music* indicates that in the United Kingdom 85% of children have played a musical instrument.¹⁷ Among these children, 22% (2.13 million) have taken music exams.¹⁸ Since 1999, piano playing among children from age 5 to 14 in the UK has increased from 8% to 23% and the report states that “adults who had private lessons as children and sat a music exam were much more likely to still play an instrument, and the higher the grade achieved, the more likely they were to continue learning. This implies that music exams offer a positive route to progression and continuation.”¹⁹

Academic research has reinforced these findings. In her dissertation “Music Assessment Collaboration Model for Secondary Music Teachers,” Mary Reid pointed out that according to music educator and researcher, Patricia Chiodo, assessment is necessary if music is included as core curriculum in schools, and, assessment can improve teacher’s planning and instruction, as well as induce students’ motivation and reinforce learning.²⁰

¹⁶ May, “A Survey in the District of Columbia”, 16-17

¹⁷ Making Music: Teaching, Learning, & Playing in the UK, A Collaborative Research Project, ABRSM, September 2014, <https://us.abrsm.org/en/making-music/3-executive-summary/> Accessed 1 November 2017.

¹⁸ ABRSM, Making Music.

¹⁹ ABRSM, Making Music.

²⁰ Patricia Chiodo, *Assessing a Cast of Thousands: Assessment Tools Can Provide Quick Recording, Fit into Instructional Time, and Streamline Individual Grading, Allowing Music Teachers to Grade Efficiently and Effectively*. *Music Educators Journal*, 2001, 17-23. Mary Reid, "Music Assessment Collaboration Model for Secondary Music Teachers.", University of California, Los Angeles, 2005. <https://search-proquest-com.www2.lib.ku.edu/docview/305033457?accountid=14556/> Accessed 3 December 2017.

When teachers have clear expectation practices, students become more actively involved in their learning. According to Researchers Jane Davidson and Sarah Scutt, music exam weighs positive impact on child education, and also establishes relatedness and autonomy upon teachers and parents.²¹ In a study which Davidson and Scutt conducted among three groups of students, teachers and parents in over a period of six month, the researchers discovered that-

The group of teachers they interviewed used examinations as target goals within a larger learning process. They had intrinsic motivational goals for their students. The researchers found that the teachers' opinions were highly influential and informed the views of the students and parents. Both parents and students relied on the teachers for structuring the learning experience, although the teachers themselves may not have realized how influential they had become. The study also highlighted the role of the examination, identifying it as an initiator and sustainer of motivation. The researchers found that the exam could also be a source of self-confidence for the student. All participants deemed the six-month journey of preparing and participating in the exam as a worthwhile experience. Most families acknowledged that exams would likely be part of their future musical plans. Clearly, all groups wanted the examination to be a constructive, learning experience.²²

In "Graded Music Examination: What do the Reports Tell Us?", Ivan Holmes and Diana Davis recognized that diagnostic and analytical feedbacks, provided by the music examination adjudicators, can be highly educational since most students are eager to seek useful advice to improve their playing.²³ The thesis surveys the exam comments by 8 adjudicators on 400 students from the 1995-2002 Australian Music Examinations Board and suggested that more

²¹ S. Scutt and J.W. Davidson, "Instrumental Learning with Exams in Mind: A Case Study Investigating Teacher, Student and Parent Interactions Before, During and After a Music Examination", *British Journal of Music Education* 16,1999, 79-95. D.T. Dumlavwalla, *Approaching the Examiner's Chair: Chronicling the Experiences of Piano Examiner Apprentices for the Royal Conservatory of Music*, 2001, 18-19 <https://search-proquest-com.www2.lib.ku.edu/docview/919730002?accountid=14556/> Accessed 3 December 2017.

²² Davidson and Scutt, 93-95. Dumlavwalla, 18-19.

²³ Ivan Holmes and Diana Davis, "Graded Music Examination: What do the Reports tell us?" Proceedings of the 27th World Conference of the International Society for Music Education 16-21 July, Kuala Lumpur, Malaysia, 2006.

vigorous and research-based training programs needed to be administered upon examiners regarding the notion of providing consistent and effective feedbacks during graded music exams.²⁴

The U.S Music Certification Exams (USMCE) is a newer exam system; its 11 levels promise to provide a tool to facilitate higher-level piano teaching. In comparison to many other music exams, teacher training (domestic and international) is a key element of USMCE, as the contents of the program are based on current learning research and knowledge of technical training, and seminar classes regarding how to administer adequate assessments and construct educational feedbacks are the core practices during training. The instructional books, created by Dr. Scott McBride Smith, provide research-based, technically sound instruction and explanation for both the teacher and student.

History of Music Examinations

Since the late nineteenth century, music examinations have provided a framework for instruction and a motivational goal for students. Trinity College London was the first, established in 1877; today it offers assessments, certifications and diplomas for all instruments and music theory, and also drama, dance and rock music. It sits exams in over 60 countries with approximately 750,000 candidates each year. The Associated Board of the Royal Schools of Music (ABRSM), was founded in England in 1889 by faculty at the Royal Academy of Music and Royal College of Music. It offers assessments for all instruments, music theory, voice and jazz. The exams currently provide assessments and diplomas in 93 countries for over 650,000 candidates annually. Many important composers, such as Ralph Vaughan Williams, have served as ABRSM examiners.

²⁴ Holmes and Davis, Graded Music Examination.

The Associated Board of the Royal Schools of Music system's influence on China's music education marketplace became important in the 1990s. The Central Conservatory of Music in Beijing adopted the exam model established by ABRSM in 1993 and initiated the first certified assessment for Chinese traditional instruments as well as piano, violin, flute, and cello. In 2006, The Central Conservatory of Music examination for Chinese traditional instruments was recognized in Canada and in the U.S. in 2007.²⁵

In Canada, two recognized exam systems are those from The Royal Conservatory of Music (RCM) and Conservatory Canada. The Royal Conservatory of Music was founded in 1886; in its early years the institution was affiliated with the University of Toronto, becoming independent in 1991. The Royal Conservatory Certification Program provides 11 levels of exams for more than 20 instruments, as well as tests in theory, voice, and speech arts and drama in more than 300 communities worldwide.

Conservatory Canada and its examination system can be traced back to the London Conservatory, established in 1891 in London, Ontario, for which it served as an examining board. The London Conservatory was absorbed by London Institute of Musical Art²⁶ in 1922 and the two became affiliated with the West Ontario Conservatory of Music from 1934-1997. The merger of Western Ontario Conservatory of Music and The Western Board of Music²⁷ in 1997 was the basis for the creation of Conservatory Canada. The first

²⁵ Boyu Zhang, *Industrialized Music Education in China: A Discussion of the "Standard Grade Examinations in Music" (SGEM) Organized by the Central Conservatory of Music, Beijing*, Helsinki Collegium for Advanced Studies, Vol 21, Helsinki, Finland, 2016, 103–120.

²⁶ A teaching institute founded in 1919. Ruth M. Stone, ed. "Volumes of The Garland Encyclopedia of World Music." *Garland Encyclopedia of World Music, Volume 3*, New York: Taylor & Francis Group. Routledge, 1997. 433-436

²⁷ The committee was founded in 1936 in Saskatoon, to unify the exam system in western Canada. Stone, 433-436

certification exam for piano, voice, and violin was offered in 1939 and continues until today.

U.S. Music Certification Exams-Description and Examining Issues

“U.S. Music Certification Exams have been developed in cooperation with the world-renowned Conservatory Canada examination system.”²⁸ U.S. Music Certification Exams offers only piano exams at the present time. Each level of the exam contains six categories of requirements.

- Three (at upper levels four) List Pieces from List A, B, C, and D representing the style periods baroque, classical, romantic, and contemporary. These are contained in the Performance Book. The List Pieces are compiled by Dr. Scott McBride Smith from the Conservatory Canada Syllabus and other sources.
- One Study, also found in the Performance Book. At Grade 9 & 10, two studies, in place of the Technic Book.
- Technical requirements consisting of Scales, Chords, Arpeggios, Modes and Licks, which consist of short melodic and harmonic patterns that jazz performers use to improvise.
- Sight Reading.
- Aural Skills: Rhythmic--Echo Clap, Pitch--Echo Sing, and Harmonic Listening.
- Marks for Memory. Extra points are awarded for student playing pieces from memory at the exam, earning two extra points per piece.

²⁸ Scott McBride Smith, Introduction to the *U.S. Music Certification Exams Performance Book, Diamond Edition: Pre-Grade 1, Grade 1, Grade 2, Grade 3, Grade 4, Grade 5, Grade 6, Grade 7, Grade 8, Grade 9, Grade 10*, Conservatory Canada, Novus Via Music Group Inc, 2015.

Each level of examination is adjudicated by members of the Conservatory Canada Board of Examiners, experienced artist-teachers who are prepared in the specific exam requirements and criteria during training sessions. In “Approaching the Examiner’s Chair: Chronicling the Experiences of Piano Examiner Apprentices for the Royal Conservatory of Music,” Diana Dumlavwalla discussed the nature of systematic and intensive apprenticeship of the training program for the Royal Conservatory of Music examiners and addressed the importance of building adequate knowledge and confidence in order to make a fair assessment during the exam, criteria that apply to USMCE Examiner Training as well, according to Scott McBride Smith.²⁹ All examiners must recognize that the exam is a learning process, and must find a balance between standard segmented criteria and holistic judgments in grading, as well as providing effective feedback; all are components of positive encouragement. Dumlavwalla pointed out that “indirect” and “direct” training act are important to the quality of assessment.³⁰ Indirect training, such as the educational background and years of teaching experience, performance, and evaluation of the examiner may very well interact with the skills learned in direct training (apprenticeship seminar, observations and assessment practice). Dumlavwalla’s study suggested that the more pedagogically experienced apprentice and senior examiners with a higher educational background and a more active performance career tend to retain greater confidence and eloquence when conducting assessments. They also cope better in troublesome situations, coping with parents, students and respectfully handling differences of opinion between examiners.³¹

²⁹ D.T. Dumlavwalla, *Approaching the Examiner's Chair: Chronicling the Experiences of Piano Examiner Apprentices for the Royal Conservatory of Music*, 2001, <https://search-proquest-com.www2.lib.ku.edu/docview/919730002?accountid=14556>/Accessed 3 December 2017. Interview with Scott McBride Smith, December 9th 2017.

³⁰ Dumlavwalla, *Approaching the examiner's chair*, 119-129, 139-144.

³¹ Dumlavwalla, *Approaching the examiner's chair*, 137-144.

U.S. Music Certification Exams-Teacher Training

The examiner apprenticeship is conducted by the Chair of the Board of Directors of Conservatory Canada and Chair of U.S. Music Certification Exams Board of Examiners, Patricia Frehlich. In my interview with Frehlich on January 20, 2018, she stated that the criteria for the selection of examiner board is rigid and extensive.³² Candidates who are eligible for the examiner apprenticeship program must hold a minimum of a Bachelor's degree in music. Preferences are granted to candidates who have a broad knowledge of the exam curriculum, or who have had numerous students participating in previous exams.

The examiner apprenticeship training procedure consists of three components: a complete study of exam syllabus and curriculum through seminar classes, observation (shadow examination) with a current member of the Board of Examiners and supervised practice-examination in real time with actual students during regular exam seasons. Assessment training is part of the seminars, using audio and video performance recordings to practice consistency and effectiveness in standard markings and feedback. The completion of examiner apprenticeship commonly takes up to a year. A unique aspect that differentiates the U.S. Music Certification Exams from many others is that all members of the examiner board are trained to use computerized devices for grading purposes and providing exam comments, instead of hand-writing on paper. During the exam, a software program generates specific markings for each category, and the examiner can select numbers of pre-composed criterial comments from the database for each standard marking. When the examination is taking place in countries where English is not the official language, all markings and criterial comments in the software data base are translated from English to the local language prior to the exam to prevent linguistic

³² Interview with Patricia Frehlich, January 18 2018.

misunderstandings for students. This new procedure has greatly improved consistency in grading and exam feedback, and enables students to receive exam results as soon as the following day.

The U.S. Music Certification Exams training program is not only designed for teachers that are selected as adjudicators, but also for general musicians interested in studying piano pedagogy and preparing students for the exams. In addition to the regular examiner apprenticeship program, a two--three day teacher training seminar, conducted by Dr. Scott McBride Smith, among others, focuses on the specific procedures and standards of the exam as well as deeper issues of learning and musical preparation: “what’s the best way to teach so that students really learn and retain?”, “what’s the best way for students to practice?”, “how can we best prepare them for performance and exams?”.³³

The training for participating teachers begins with an overview of the examination, addressing the standard criteria and discussing exam requirements. A piece from the lower level performance books is played to show assessment criteria; the focus is on factors of performance that can be rationally assessed, rather than subjective evaluations of artistic merit. These include, for example, technical precision, rhythmic acuity, projection of dynamics, tonal contrast and appropriate use of pedal. Information about student results from past examinations is presented, focusing on problem areas:

- Excessive wrong notes due to misreading and slips as a result of nervousness
- Bad rhythm, typically lack of precise counting in long notes
- Unsteady tempo, caused by lack of slow practice and consistency in practicing with metronome
- Continuity problems often attributed to poor preparation of the piece.

³³ USMCE Teacher Training Manual, Copyright pending.

The example piece is played in a mechanical fashion at a slow tempo but with precise rhythmic and notational reading, to indicate the scoring for a passing performance. This discussion emphasizes the fundamental merits in assessment of a good performance always begins with correct notes, accurate rhythm, appropriate tempo, and good continuity.³⁴ Stylistic characteristics of music from different periods are also considered.

The following portion of the training seminar reviews elements tested in the exams. The scoring rubric is explained and discussed to focus the teacher on relevant aspects of the performances.

Table 1: Marking Standards for U.S. Music Certification Exams.³⁵

Marking Standards	
90 - 100 percent	First Class Honors with Distinction
80 - 89 percent	First Class Honors
70 - 79 percent	Honors
60 - 69 percent	Pass
0 - 59 percent	Insufficient to Pass

The average score of all students around the world taking the U.S. Music Certification Exams usually totals in the range between the high 60s to the low 70s; students who score above 90 are relatively few.

USMCE Teacher Training seminars include in-depth discussion of stylistic background, as well as instruction about dynamic range and sound production in keyboard instruments of each era. Further studies consist of description and analysis of representative composers, musical genres, articulation, pedaling, musical form, and literary influences that are particularly

³⁴ USMCE, Training Manuel.

³⁵ USMCE, Training Manuel, 4.

associated with each work in the USMCE anthologies. Each piece is analyzed to highlight important teaching points and pedagogical approaches for piano technic, sound quality, balance of voices, and a variety of practice tools and performance tips. These discussions are significantly helpful for both teachers and students, not only in their preparation for the exams, but in their overall practice habits and work quality.

Assessments of musical performance can be highly complicated, both technically and psychologically, as Sam Thompson and Aaron Williamon discussed in “Evaluating Evaluation: Musical Performance Assessment as a Research Tool.”³⁶ This is often due to the cognitive variability of psychological reality that the adjudicator experiences during performance. Subjective factors such as examiner’s personal relationship with the instrument, preferences of certain repertoire and styles, and even opinions about the performer’s appearance can all affect the markings.³⁷ Most exam systems, including USMCE, use segmented, pre-set criteria to mark the fundamental technical demands such as fingering, rhythm, tempo, and continuity for each element. More general overall markings are given as well to allow the adjudicator a certain amount of freedom to compare and assess performer’s musicianship and stylistic interpretations, but focused on rational measurement of discernible, generally accepted features of performance rather than the personal opinion of each examiner. According to Peter Johnson:

The three-fold purpose of assessment criteria as an aid to the examiner: to help the examiner go beyond the minimum standards required of the students; to assist the examiner in identifying innovative and idiosyncratic work amongst all the performances; and to distinguish between technical and artistic achievements.³⁸

³⁶Sam Thompson and Aaron Williamon, *Evaluating Evaluation: Musical Performance Assessment as a Research Tool*, *Music Perception*, Vol. 21, No. 1, Fall 2003, 21–41 Accessed 3 December 2017.

³⁷ Thompson and Williamon, *Evaluating Evaluation*, 26-27.

³⁸ P. Johnson, “Performance as Experience: The Problem of Assessment Criteria”, *British Journal of Music Education* 14, 1997, 271-282. Dumlavwalla, 15.

Instructional Books and Their Pedagogical Purposes

The U.S. Music Certification Exams instructional books are used in preparation for the examinations. There are three books at each level.

- **Performance Book** includes classical pieces, popular-style music, and études. These include selections from different style periods, piano pieces by recognized masters such as J.S. Bach, Mozart and Schumann as well as works composed by lesser-known figures such as Christopher Graupner, Johann Caspar Fischer, Daniel Gottlob Türk, Fritz Spindler, and Rheinhold Glière. Living composers are represented, including a variety of works by women composers. These include, among others, Jean Ethridge, Linda Schwartz and Joan Hansen.
- **Technic Book** sets out examples and directions for the playing of scales, chords, arpeggios, modes, and licks (short melodic and harmonic motifs that can be used during jazz improvisation), along with dynamic, articulation, and rhythmic variants in each key. The Drill section demonstrates important technical exercises to develop awareness of a healthy, pain-free technic, with exercises such as Drawbridge and Upstroke and Inward and Outward Rotation (see page 29-33).
- **Skills Book** includes short sight-reading examples along with rhythmic and aural skills exercises, which are critical for the development of musicianship.

In my interview with Dr. Scott McBride Smith, the creator of USMCE instructional books, he provided a general overview for the materials in the Technic, Skills, and Performance Books. According to McBride Smith, the exercises in the Technic and Skills Books originated in the *American Popular Piano Series*, with some pieces composed by New Zealand composer

Christopher Norton (1953-) and others composed by McBride Smith (1951-), who also devised the rhythmic and aural drills.³⁹ They were designed to help students learn essential technical, rhythmic and aural skills in a sequential approach. After three years of research, McBride Smith distilled the trajectory for learning basic skills into simple steps that students can easily follow.⁴⁰ Each book was tested by selected teachers with their students across North America prior to publication to ensure practicality and effectiveness. The pieces in the Performance Books are selected from the Conservatory Canada Exam Repertoire Syllabus and other sources; the selections of repertoire for the U.S. Certification Exams change every three years.

My research and analysis of U.S. Music Certification Exams Skills and Technic books is based on the teaching of technic and basic skills as represented in work of Tobias Matthay (1858-1945) and Dr. Scott McBride Smith (1951-). Matthay and McBride Smith recognize the fundamental merit of a piano technique that produces a resonant, variegated sound and is performed with ease, virtuosity and absence of pain and injury. Both pedagogues also stress the importance of aural skills and pattern recognition in learning.

U.S. Music Certification Exams Technic Book and Skills Book Pre-Grade 1- Grade 10

In Matthay's method book *Approach to Music*, Book 1 "How do you do Mr. Piano?" the pedagogue pointed out the importance of receiving correct preliminary instruction at the beginning stage of piano learning.⁴¹ Matthay recognized the danger of blind practice without understanding the basic muscular movements and mechanism in sound production, as false habits can easily form and become difficult to re-shape. For a beginning level student, it is crucial for the teacher to explain certain principles before introducing notation.

³⁹ Interview with Scott McBride Smith, December 9th 2017.

⁴⁰ Smith, Interview, 2017.

⁴¹ Tobias Matthay, and Harold Craxton and Felix Swinstead, *Approach to Music*, Book 1 "How do you do. Mr. Piano?" by Tobias Matthay, London: Boosey & Hawkes, 1941.

- Fundamental rhythmic impulses and patterns and their relation to bodily movements such as clapping or tapping.
- Natural and relaxed position of hands and how rotary exertion of the forearm is applied to change this position in playing.
- Role of velocity in touch and its relation to production of tone, as well as the amount of weight that is needed to sound the key.
- Importance of listening, not only for the recognition of different notes, but to identify good and bad tone as well.
- Importance of muscular awareness. The student needs to be constantly asking him/herself “how does it feel in the fingers and arms?” when certain sounds are produced.

The instructional books of USMCE pre-grade 1 are assumed to start after method study is finished, therefore they do not provide the most basic notational reading guidance, as Marianne Uszler pointed out in *The Well-Tempered Keyboard Teacher*:

The teaching of reading, counting, and technical skills is often assumed to be the sole responsibility of the instructor, not of method books. Nonetheless, books on keyboard instruction, whether called method books or not, generally provide technical guidance in the form of exercises, etudes, or comments on technique just as they also set the tone for how pitch and rhythm reading will be encouraged to listen, experiment, and create. The most important factor, however, is that these books influence what music the student will play and hear during these formative years. Ultimately, it is the music itself that affects what the student actually learns to do and value.⁴²

However, the importance of introducing fundamental rhythmic instruction is recognized by both Matthey and Uszler as primary in lessons for beginners. Both pedagogues stress the importance of “counting” and using body movement to capture the rhythmic impulses. Uszler

⁴² Marianne Uszler, and Stewart Gordon and Scott McBride Smith, *The Well-tempered Keyboard Teacher*. 2nd ed. New York: Schirmer Books, 2000, 4.

stated that “rhythm is a physical sensation, easier to feel than to describe.” And “rhythmic activities involving large-muscle or total body movement are suggested in many methods.”⁴³ In Matthay’s *First Lights on Piano Playing*, he addresses the use of clapping or tapping on the rhythm of simple popular tunes as an effective method to explain metrical impulses and directions.⁴⁴

In the *Skills Book*, USMCE Pre-Grade 1, the counting and identification of variety of basic rhythmic patterns begin immediately. Exercises consist of hand-clapping or knee-tapping examples in different meters while counting out loud, then playing musical examples with notated fingering. These provide critical practice building a holistic understanding of steady rhythm and tempo (see figures 1 through 3). In addition to rhythmic studies, notational reading exercises and singing is incorporated in the exercises. A short motif is written out in each module⁴⁵ and the student begins his/her practice by first identifying the intervallic relationship between the notes (step or skip), Next, the motif is sung, first as the melody is played on the piano, then *a capella* (see figure 4). These studies are important in improving aural skills, teaching the student to notice intervallic and pitch relations.

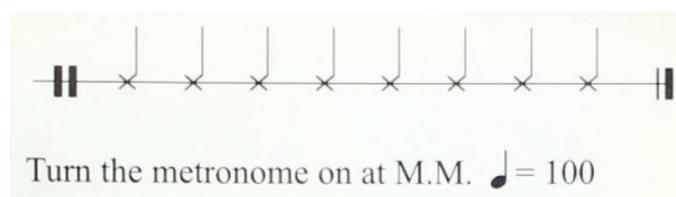


Figure 1: USMCE Skills Book Pre-Grade 1, Rhythmic Clapping Exercises. Using the metronome and even rhythmic figuration, student is able to understand how tempo and rhythm is related.

⁴³ Uszler, Gordon and Smith, *Keyboard Teacher*, 8-11.

⁴⁴ Matthay, Tobias, *First Light on Piano Playing*, London: Boosey & Hawkes, 1940.

⁴⁵ each unit is divided into sections, called modules. The difficulty level of each module gradually increases according to the overall level of the unit.

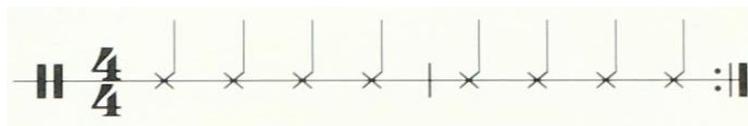


Figure 2: Skills Book Pre-Grade 1, Rhythmic Clapping/Tapping Exercise. By incorporate clapping and tapping, student is able to understand how rhythm is related to bodily movements.

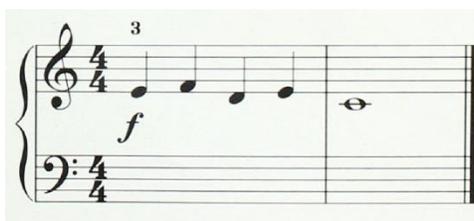


Figure 3: Skills Book Pre-Grade 1, Sight-Reading Exercise with Counting/Assigned Fingering. These exercises fully utilize the five-finger position and rhythmic counting.

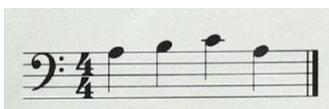


Figure 4: Skills Book Pre-Grade 1, Pitch Singing Exercise. These exercises help facilitate the idea of “ears before fingers”. Student is encouraged to learn how notes are sound and locate correct pitch before playing the notes.

The Technic Book of USMCE Pre-Grade 1 (as well as the other levels) focuses on various exercises and essential technical patterns including scales, chords, arpeggios and drills, which help build technical skills such as forearm rotation, relaxation of arm, wrist and finger, weight release and quality of sound related to form and speed of touch. McBride Smith states in the Introduction of each Technic Book:

Although many books concerned with developing pianistic skills use the word “technique”, we prefer to think in terms of “technic”. That’s because the root word for technic is the ancient Greek tekhnikos- “about art.” Think about it. How can you play the piano beautifully without art? And how can you express yourself if you can’t control your fingers?⁴⁶

⁴⁶ Scott McBride Smith, *U.S. Music Certification Exams Technic Book, Diamond Edition: Pre-Grade 1, Grade 1, Grade 2, Grade 3, Grade 4, Grade 5, Grade 6, Grade 7, Grade 8, Grade 9, Grade 10*, Novus Via Music Group Inc, 2010.

The Pre-Grade 1 contains exercises based on pentascales and triads in white-key major scales C, F, G, D, E, A (B major is excluded due to its different fingering). Each pentascale has ten variations based on stepwise parallel motion, stepwise contrary motion, disjunct parallel motion, and disjunct contrary motion (see figures 5 through 8). In his treatise *The Visible and Invisible in Pianoforte Technique, Being a Digest of the Author's Technical Teachings up to Date*, Matthay discussed the importance of using forearm rotation in piano playing.⁴⁷ The technic of rotation is letting the forearm and hand move in their most natural and comfortable motion. If the arms are resting naturally at the side of the body, the radius and thumb are pointing forward. If the hand and arm keep the same position when placed on the keyboard, the radius and thumb are pointing upward, a position that doesn't permit natural finger motion on the keys. To place the fingers on keys, rotatory exertion is required. There are three steps in the completion of rotation.

- **Preparation-** also known as the preparatory swing. before playing a note towards one direction (medial or lateral), the hand must prepare and rotate in the opposite direction. Fingers lift slightly.
- **Execution-** the hand turns to play the designated key.
- **Relaxation-** after the key is sounded, it's important to stop applying pressure on the key and only use the minimal residue of the arm weight to sustain the note.

When rotation is applied to pentascales, two types of rotatory motion are introduced.

⁴⁷ Tobias Matthay, *The Visible and Invisible in Pianoforte Technique, Being a Digest of the Author's Technical Teachings up to Date*. London: H. Milford, Oxford University Press, 1932, 26-36, 49-65.

- **Single Rotation**- where each note moves in the opposite direction, preparation for the next note directly follows the finger attack (see figure, 5 and 6). This technic is best represented in playing Alberti Bass style or Tremolos.



Figure 5: Technic Book Pre-Grade 1, Pentascale Disjunct Parallel Motion. Single Rotation is applied to this Pentascale, as each note moves in the opposite direction (medial and lateral).



Figure 8: Technic Book Pre-Grade 1, Pentascale Disjunct Contrary Motion. Single Rotation is applied to this Pentascale, as each note moves in the opposite direction (medial and lateral).

- **Double Rotation**- when each note moves toward the same direction ascending or descending, the hand and forearm must re-rotate and re-prepare (medial and lateral movement on each note) from the opposite direction of each note. This technic of individual rotation does not apply to fast scalic passages due to the notion that fast speed dictates less time; as a result, double rotation can only be executed in groups because all the notes that are moving in the same direction are carried within one rotatory movement, until the next opposite rotatory point occurs.



Figure 7: USMCE Technic Book Pre-Grade 1, Pentascale Stepwise Parallel motion. Double rotation is applied when practice this scale under slow tempo, and the rotatory movement is grouped from C to G (medial in the left hand and lateral in the right hand) and from G back to C (lateral in the left hand and medial in the right hand).



Figure 8: Technic Book Pre-Grade 1, Pentascale Stepwise Contrary Motion. Double rotation is applied when practice this scale under slow tempo, and the rotatory movement is grouped from C to G in the right hand (lateral) and G to C in the left hand (medial), and then reverse.

In *The Visible and Invisible in Pianoforte Technique* Matthay stated that the purpose of having good technique is to produce good quality of tone and the ability to play musically.⁴⁸

Physiologically, the quality of sound is closely related to the speed of touch; the faster the attack, the louder and more brilliant sound is produced, and the slower the attack, the softer and more lyrical of the sound. However, loud or soft sounds in themselves do not always indicate good tone. The giants of Golden Age pianists such as Arthur Rubinstein and Claudio Arrau both characterized for the mesmerizingly ringing and resonant tone in their playing: the secret lies in the “timing” and relaxation of the muscular components such as the finger, wrist, forearm and shoulder. In the training manual of U.S. Music Certification Exams, McBride Smith pointed out that understanding the mechanism of the piano key is essential to a good tone.⁴⁹ When the key is

⁴⁸ Matthay, *The Visible and Invisible*, 12-14, 39-48.

⁴⁹ USMCE Teacher Training Manual, Copyright pending.

pushed down slowly and silently, one can feel almost no resistance near the top of the key; the hammer slowly rises. About 30 to 50 percent of the descent (depending on the regulation of the piano), resistance occurs: this is called ‘point of sound’. At this precise moment of resistance, the key engages the hammer and the hammer hits the string. The student is encouraged to avoid high-lifting fingers and forcefully pounding the keys, but to aim the energy of the finger at the ‘point of sound’ and feel the key as it descends. Matthay also suggested a similar approach in the *First Lights on Piano Playing*, an exercise he referred to as ‘playing by weight’ which consists using the fist (sideways) to press two black keys slowly and softly with a slightly flexed arm and then relax the arm and hand allowing the keys come up.⁵⁰ The purpose of this exercise is to help student realize that only very little effort is needed to make the notes sound and to understand the “timing” of sound.

Both McBride Smith and Matthay recognized two types of tension in piano playing, keybedding and arm gripping. Keybedding is a common false use of technic where, after the key is sounded and the hammer falls back from the string, the pianist continues to apply excess pressure to hold down the key instead of relaxing the finger. This habit prevents the pianist from being able to play fast and easily due to muscular co-contractions: it can cause serious injuries, as the soft tissue and tendons within the hand and arm are stretched when force is applied to both down and up motions simultaneously. According to the anatomy of the hand, not all fingers are supposed to work as individual. The thumb can move individually because it connects with a separate muscle group called flexor pollicis langus in the forearm. But the index finger, third finger, fourth finger, and the fifth finger share a different muscular resource in the forearm called flexor digitarum profundus so they are supposed to move as a group. When pianist keybeddings

⁵⁰ Tobias Matthay, *First Light on Piano Playing*, London: Boosey & Hawkes, 1940, 12-13.

one finger and moves another, one is forcefully pulling the muscle towards two directions and it causes tension and sometimes micro tears which form scar tissues later and become very difficult to move. Many pianists tend to flex their arms when playing lyrical sections or fast scale passages and arpeggios, misguidedly thinking that more flexion of the arm (“arm gripping”) gives better control of the fingers, or simply gripping due to nervousness. But the reality of over-flexing the arm during playing is that the weight cannot be transferred down to finger tips when the arm is tense. Over-flexion causes fingers to lose connection with the keys, and the movement of the finger becomes jerky and difficult to command. Matthay suggested the technic of “arm off” in *Relaxation Studies In the Muscular Discriminations Required for Touch, Agility And Expression In Pianoforte Playing*, and it requires the pianist to search for a particular sensation of weighted fingertips and “floating” arm.⁵¹ Arm weight is essential to making a “singing” sound at the piano. The arm needs to be able to move and be flexible to the kind of touch the pianist wants to produce. This is also very helpful to remember when one is prone to keybedding. By isolating and stabilizing the arm and keeping the wrist and elbow free of tension, the fingers are less likely to grip the keys once they have already been depressed. This technic can be applied to all exercises throughout the books.

In the Skills Book of Grade 1 and Grade 2, a variety of articulations such as legato, slur (short passage with connected notes, generally consisted two notes with the second note played softer and shorter), staccato, and grace note are introduced in daily practice. Counting while playing and rhythmic tapping is still emphasized, with exercises that use of both hands simultaneously (see figure 9 and 10).

⁵¹ Tobias Matthay, *Relaxation Studies In the Muscular Discriminations Required for Touch, Agility And Expression In Pianoforte Playing*. London: Bosworth, 1908, 24-32, 55-64.

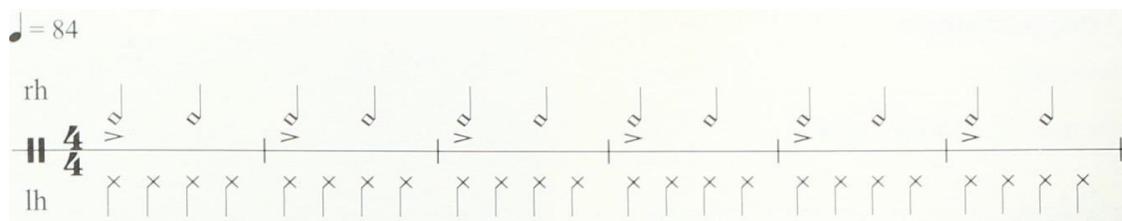


Figure 9: Skills Book Grade 1, Rhythmic Tapping/Counting Exercise with Both Hands.

Figure 10: Technic Book Grade 1, Sight-Reading Exercise with Counting/Assigned Fingering. Aural skills are practiced by the singing of the whole pentascales, triads and key-related short melodies (see figure 11), with an emphasis on building a strong aural sense of the tonic, dominant and major triad.



Figure 11: Skills Book Grade 2, Short Melody Singing Exercise.

The exercises in the Technic Book of Grade 1 and 2 focus on single and combinatory articulations of the scales, as well as simple cross-hand technic when playing triads in different octaves (see figure 12 and 13).

Figure 12: Technic Book Grade 1: Cross Hand Triad Exercise.

Figure 13: Technic Book Grade 1: Cross Hand Broken Triad Exercise.

Certain exercises demand that the student play two types of articulation simultaneously, such as right hand legato and left hand staccato (see figure 14). An effective innovation regarding pentascale practice called “accented rhythmic elongation” is introduced in Grade 2. This exercise demands the player to pulse and emphasize a particular beat each time. By doing so, the student can have time to exam the fingering, sound and form of the hand on the paused note and learn to use brain power to command specific fingers to stop and continue on any given beat of the scale. Also, the exercise greatly improves the skill of keeping hands precisely together, as the scale is broken down into smaller groups of notes and is easier to process mentally (see figure 15).

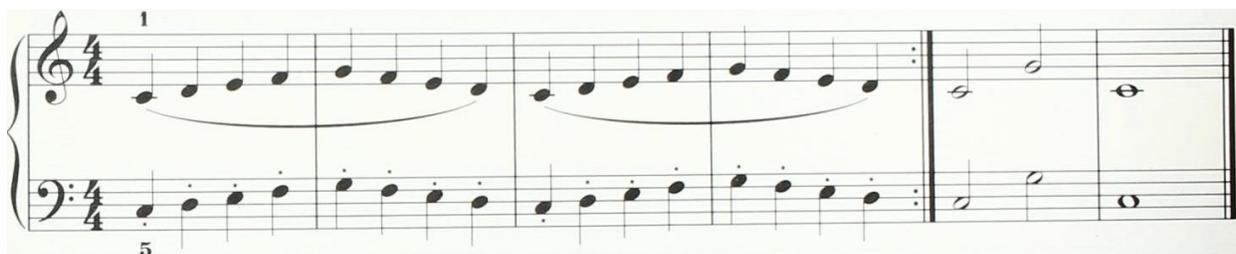


Figure 14: Technic Book Grade 1, Pentascale with Combinatory Articulations.



Figure 15: Technic Book Grade 2, Pentascale with Accented Rhythmic Elongation.

From Grade 3 to Grade 4, in addition to expanding the scales to one or more octaves and introducing major and minor keys that start on both white and black keys, the technic studies in these two levels are specifically designed for practice of rotation and different types of touch. In Grade 3 Technic Book, McBride Smith compared the use of **Inward** and **Outward Rotation** to turning a door knob.⁵² By playing a simple exercise consisting of ascending two-note slurs with fingers 1 and 2, **Inward Rotation** can be achieved through four steps:

- The thumb turns and rest on its nail on the first note.
- Elbow moves slightly away from the body.
- Other fingers rise above the keys.

⁵² Scott McBride Smith, *U.S. Music Certification Exams Technic Book, Diamond Edition: Grade 3*, Novus Via Music Group Inc, 2010.

- This inward rotation is completed by playing the second note and relaxing afterwards (see figure 16).

Regarding **Outward Rotation**, the exercise is similar but consists of a descending two-note slur using fingers 3 and 2. The steps are:

- The third finger turns slightly towards the 5th finger on the first note.
- Elbow moves slightly in to the body.
- The thumb and second finger rise off the keys
- Play the second note and relax (see figure 17).



Figure 16: Technic Book Grade 3, Inward Rotation Exercise.



Figure 17: Technic Book Grade 3, Outward Rotation Exercise.

In *The Act of Touch In All Its Diversity: an Analysis And Synthesis of Pianoforte Tone-production*, Matthay recognized the three independent yet interrelated technics in sound production: arm touch; hand touch; finger touch.⁵³ When one of the three types of technic is working independently, the other two sets of muscles must provide support in a relaxed and non-controlling manner. These technics are discussed more thoroughly and practically in the Grade 3 and 4 Technic Book with **Drawbridge**, **Downstroke**, and **Upstroke** exercises designed to help students understand and familiarize themselves with the gestures. The use of arm touch lies in the practice of **Drawbridge**, the preparation for this gesture consists of three steps:

- Rest one arm on top of the other arm.
- Relax the top arm and let the natural arm weight sink into the bottom arm, and then flex the top arm to experience the contrast between “heavy” and “light” arm.
- Chose a note and place the slightly flexed third finger on the surface of each key and gently release the arm weight into keys, while maintain the wrist level with the hand.

After completion of this preparatory practice, the exercise can be transferred to any scale by using one finger or an open fifth (see figure 18 and 19).

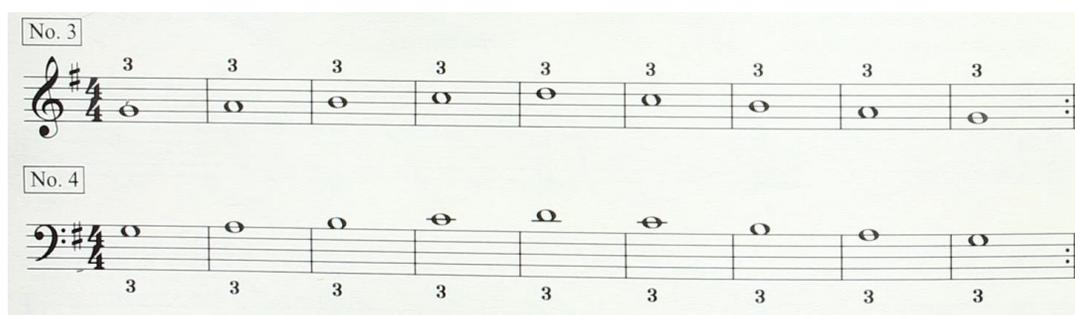


Figure 18: Technic Book Grade 3, Single Note Drawbridge Exercise.

⁵³ Tobias Matthay, *The Act of Touch In All Its Diversity: an Analysis And Synthesis of Pianoforte Tone-production*. New impression. London: Longmans, Green and co., 1916, 156-212, 273-278.

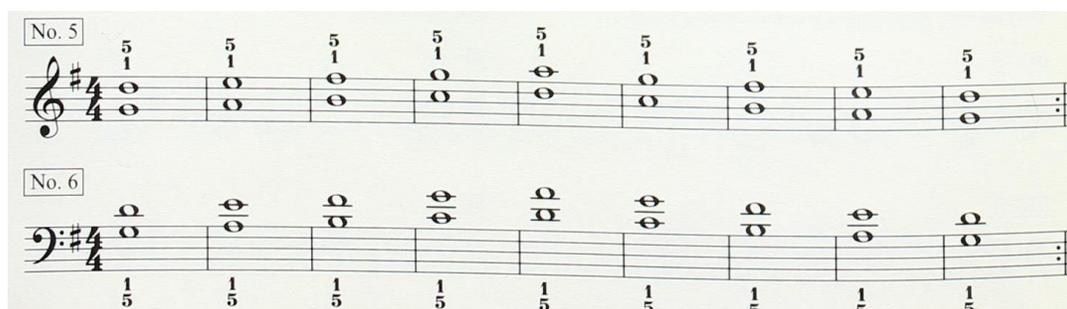


Figure 19: Technic Book Grade 3, Open-Fifth Drawbridge Exercise.

The **Downstroke** exercise is mainly associated with the hand touch, where the energy and movement drive down from the wrist area. In the Technic Book of Grade 4, a preparatory exercise for the **Downstroke** consists of any major or minor second interval. The player is instructed to rest both fingers on the surface of the keys and swing “in” as the arm moves straight up and toward the fallboard with wrist raises and fingers remain on the keys, then creating sound by swing back “down” into keys with all three muscular components, while keeping the hand, wrist, and arm straight and level. As always, the fingers must relax after striking the keys (see figure 20).

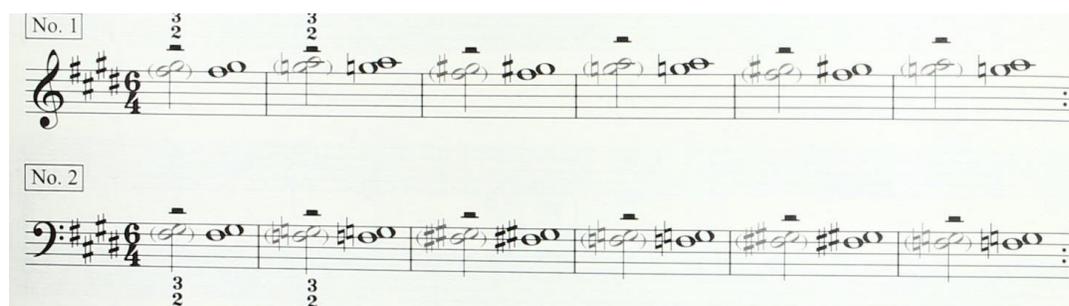


Figure 20: Technic Book Grade 4, Downstroke Exercise.

Lastly, **Upstroke** exercises focus more on the technic of finger touch, with slurs constructed on major and minor intervals. The first note of each slur is played with only finger motion, and the second note is triggered by swing “in” as the arm moves straight up toward the fallboard and the wrist raises. McBride Smith compares this technic to jumping off a diving board, as the body goes up, represented by the arm and wrist, and the fingers push the key down, like feet pushing down the diving board (see figure 21).⁵⁴



Figure 21: Technic Book Grade 4, Upstroke Exercise.

Both **Drawbridge** and **Upstroke** technic are united with **Inward** and **Outward Rotation** exercises in Grade 5 combining the foundational muscular movements and correct tone production (see figure 22 through 24).

⁵⁴ Scott McBride Smith, *U.S. Music Certification Exams Technic Book, Diamond Edition: Grade 4*, Novus Via Music Group Inc, 2010.



Figure 22: Technic Book Grade 5, Drawbridge/Rotation Exercise.

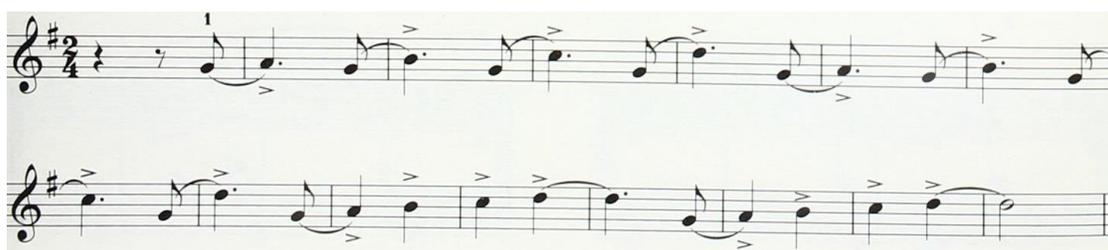


Figure 23: Technic Book Grade 5, Upstroke/Inward Rotation Exercise.



Figure 24: Technic Book Grade 5, Upstroke/Outward Rotation Exercise.

Most students struggle with fingering when practicing scales of more than one octave, as they found difficult to locate “crosses” under or over particular fingers, especially playing with both hands. A specific exercise called “stop and go” is found first in the Grade 4 Technic Book of to combat this issue. It is similar to “accented rhythmic elongation” since it requires the player to pause on the third and fourth finger of the right hand when ascending and the thumb while descending vice versa for the left-hand scale (see figure 25). This study is suitable for scales

starting on both white keys and black keys because of the locations for thumb crossing are unchanged. This drill greatly assists fingering memorization.



Figure 25: Technic Book Grade 4, “Stop and Go” Exercise.

The exercises in the Skills Book for Grade 3 and 4 incorporate more advanced rhythms and melodies. The sight-reading studies utilize varied articulation, polyphony and diverse hand movements (see figure 26). The rhythmic studies also became more complicated, with frequent rests, irregular accents, and syncopated beats (see figure 27). In the singing exercises, the melodies include stepwise intervals and skips and leaps, creating challenges in pitch accuracy (see figure 28).



Figure 26: Skills Book Grade 3: Sight-Reading Exercise with Combinatory Articulations.

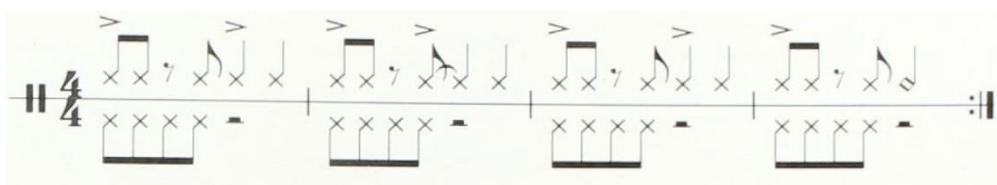


Figure 27: Skills Book Grade 4, Rhythmic Tapping/Counting Exercise.

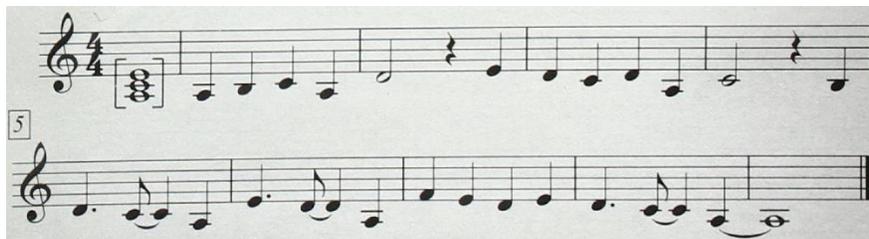


Figure 28: Skills Book Grade 4, Pitch Singing Exercise.

From Grade 5 to Grade 8, contents in the Technic Books resemble an exuberant and systematic conservatory-style exercise routine. In addition to providing all major- minor scales and arpeggios in parallel and contrary motion, chromatic scale and modes (Dorian, Aeolian, Lydian and Mixolydian) are also introduced to expand the learner's practical knowledge. A variety of rhythmic variations are presented, for example one in which the right-hand plays quarter notes while the left-hand plays eighth notes, and pattern changes from duplet to triplet

which benefit the learner's dexterity, hand coordination, and rhythmic control. These exercises set a framework and provide solid preparation for the études in Grade 9 and 10, where independent or combinatory technics are learned in broader musical contexts. Studies for sight-reading in the intermediate and higher levels became standard short pieces, associated with assorted rhythmic complexities and keys. Each sight-reading exercise encourages the learner to proceed analytically and utilize skills to recognize notational and rhythmic similarities or differences, recognize and remember the places where mistakes occurred after first attempt and make greater effort in reading and avoid similar mistakes, and lastly, maintain a steady tempo and continuity at each time, do not stop, even when mistake befalls. Other aural skill studies at the higher level mainly focus on memorization of more complex rhythmic patterns, on recognition of various cadences and modes in a single or two-part melody, then singing one of the melodies while playing the counter melody. The Skills Books from Grade 5 to Grade 10 equip the learner with extensive reading and ear-training skills, leading to a greater understanding of the repertoire each student is learning.

U.S. Music Certification Exams Performance Book Pre-Grade 1-Grade 10

The Conservatory Canada Syllabus for Piano Certificate Program website indicates that the music in the repertoire database has been assembled from variety of standard educational publications and contemporary anthologies.⁵⁵ The selected pieces in each level are from different style periods and contain similar and balanced technical demands. The works in the U.S. Music Certification Exams Performance Books are drawn from the Conservatory Canada Syllabus, as well as from new sources such as the *American Popular Piano Series*. Jazz or popular style pieces, composed by Christopher Norton, Scott McBride Smith, Donald Cook, Linda Schwartz,

⁵⁵ Conservatory Canada, Syllabi for Piano, <http://conservatorycanada.ca/wp-content/uploads/2017/07/Levels-1-10.pdf>/Accessed 3 December 2017.

and Joan Hansen are included in the Performance Books to promote stylistic and technic variety and to facilitate an enjoyable learning experience. According to the comments and reports from teachers, many have found the USMCE repertoire appealing to students and the quality of music is very high.

The music selections of lower levels (Pre-Grade 1 to Grade 4) and intermediate levels (Grade 5 to Grade 8) include standard repertoire by prominent composers and less-familiar pieces with proven pedagogical value. Baroque compositions such as dance movements, inventions and song-like pieces by J.S. Bach, Jean-Philippe Rameau, Domenico Scarlatti, and François Couperin contributed to the study of contrapuntal music. This music helps the student improve clarity of articulation, hand coordination and tonal balance. Polyphonic music also cultivates better understanding of phrasing and fingering, as the performance of linear requires careful balance and interaction between the hands. There were many eminent composers in the baroque era, who today are studied or performed with equal attention. Compositions such as Allemande in G by Johann Hermann Schein (Grade 1), Minuet in C minor by Jeremiah Clarke (Grade 2), “The Fifers” and “La Gemissante” by Jean-François Dandrieu (Grade 3 and 7), Intrada by Christoph Graupner (Grade 5), Chaconne by Johann Caspar Fischer (Grade 6), and Sonata by Giovanni Benedetto Platti (Grade 7) are not well-known to most teachers and students. Yet their musical level is high, and each piece contains great teaching value and are appealing to students.

Compositions from the classical style period that are included in the Performance Books Pre-Grade 1 to Grade 8 primarily emphasize the study of musical forms and balance, along with the simple joy of performing appealing pieces. There are many sonatinas (always appealing to students), including works composed by Anton Diabelli (Grade 2), Franz Spindler (Grade 3), Friedrich Kuhlau (Grade 4, 7), and L. V. Beethoven (Grade 5). Other multi-sectional works,

such as Minuet and Trio by Franz Joseph Haydn (Grade 4), Bagatelles by Beethoven (Grade 6,7,8), and along with rarely performed compositions like Contemplation in F by Daniel Gottlob Türk (Grade 3), Capriccio by Johann Wilhelm Hässler (Grade 5), Minuet and Variations by Thomas Augustin Arne (Grade 7), and Sonata in A by Domenico Cimarosa (Grade 8), are all educationally beneficial for pedagogical purposes.

Repertoire of the romantic and contemporary period in the lower and intermediate levels range from Felix Mendelssohn to living composers. Character pieces are frequently found in their works of these eras. Compositions by Frédéric Chopin (Waltz, Op. 69, No. 1, Grade 8), Felix Mendelssohn (*song without words*, Op. 30, no. 3, Grade 7), Johann Brahms (Waltz, Grade 7), and Alexander Scriabin (Album Leaf, Op. 45, No.1, Grade 8) are recognized as part of the standard concert repertoire and are often studied by amateur and professional pianists. Works based on folk songs and nationalistic music such as The Fishermayden's Song by Thomas Frederick Dunhill (Grade 2), Romance by Béla Bartók (Grade 5), Italian Polka by Sergei Rachmaninoff (Grade 6), Romance by Rheinhold Glière (Grade 7), and Spanish Dance-Oriental, Op. 39, No. 2 by Enrique Granados are also incorporated in the books. This repertoire serves as an effective tool for the student to develop his/her musical imagination and comprehends aspects of stylistic diversity.

In the higher levels of the USMCE Performance Books (Grade 9 and 10), students encounter compelling works in the pianist's core repertoire that reflect the pianist's technical and artistic maturity. Large-scale baroque contrapuntal compositions and sonatas by J. S Bach and Antonio Soler, contrasting classical sonata movements and other genres such as Fantasia, Variation and Rondo by Mozart, Haydn and Beethoven require a significant elevation in technical challenges and musical sophistication. Works from the romantic and contemporary style period include a wide range of single movement character pieces and a contemporary

complete dance suite, many considered essential in piano teaching and suitable for concerts and competitions. Examples include Impromptus by Franz Schubert, a Polonaise and a Waltz by Chopin, a Prelude by Claude-Achille Debussy, a Nocturne by Gabriel Fauré, the complete Romanian Folk Dances by Bartók, and Spanish music by Granados and Isaac Albeniz.

The repertoire of the U.S Music Certification Exams Performance Books compliment and practicalize all technics discussed in Skill Books and Technic Books. Pedagogically, each technical and stylistic challenge is incorporated in specific pieces, which serve specific learning purposes for the student (see figure 29 through 33).

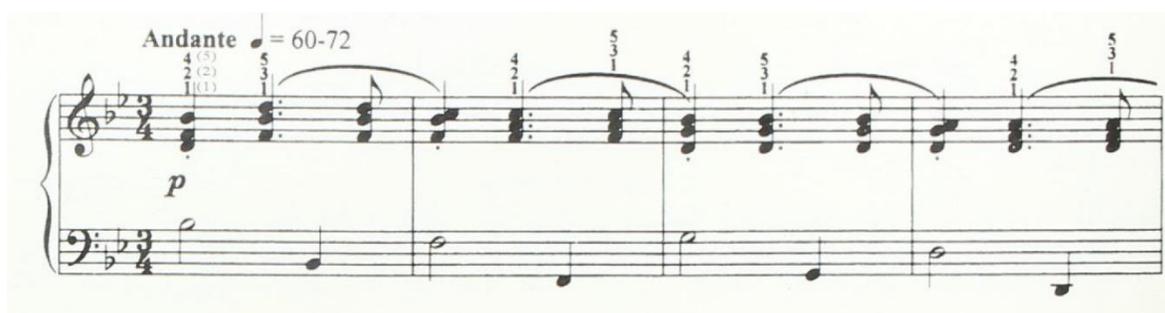


Figure 29: USMCE Performance Book Grade 3, Drawbridge in Performance Practice-*Sarabande in B Flat* by Johann Pachelbel.



Figure 30: Performance Book Grade 4, Inward and Outward Rotation in Performance Practice-*Minuet* by J.P. Rameau.



Figure 31: Performance Book Grade 5, Upstroke/Inward and Outward Rotation in Performance Practice-“*On the Lawn*” by Jean Coulthard.

The image shows two systems of a musical score. The first system is in 2/4 time, marked "pp" and "cresc.". The right hand has a melodic line with slurs and fingerings (2, 1, 5, 4, 5). The left hand has a rhythmic accompaniment with slurs and fingerings (2, 3). The second system is in 3/4 time, marked "f" and "p". The right hand has a melodic line with slurs and fingerings (2). The left hand has a rhythmic accompaniment with slurs and fingerings (2, 3).

Figure 32: Performance Book Grade 5, Drawbridge/Upstroke with Inward/Outward Rotation in Performance Practice- “*Sunday Morning*” by Jean Ethridge.

Accompanying the launch of U.S. Music Certification Exams, all compositions in each level of Performance Book are recorded by pianist Teng Fu in Swarthout Recital Hall of University of Kansas. These recordings serve as educational resources for examiner apprenticeship and general learning purposes.

Conclusion

The importance of systematic teaching and music pedagogy is beginning to receive recognition around the globe. Piano lessons based on informed, research-based instruction have the potential to provide a common ground between academia and the broader non-professional piano teaching market. With an adequate exam system and training program, the likelihood is strong that a more motivational, engaging and productive learning environment for both amateur and professional musicians is possible; the educational value of the U.S. Music Certification Exams and its instructional books is promising. Studies prove that self-efficacy among musicians can be achieved eminently through both learning and performance, as Laura Richie and Aaron Williamon discussed in “Measuring Distinct Types of Musical Self-efficacy.”⁵⁶ For any professional or amateur musicians, the key for building self-efficacy and confidence lies in a persistent belief of one’s ability to accomplish a variety types of tasks, range from completing daily practice of scales and other technic, to handling stage fright when performing in public. By systematically studying the materials in the 11 levels of U.S. Music Certification Exams, a student will acquire adequate skills in the initial stages of his or her musical development by mastering sufficient technical, musicianship and artistic pieces, drills and exercises. The USMCE examination system also provides a first look at methodically organized western-style piano teaching. This provides opportunities to change and improve general piano instruction in countries such as China where the philosophy of western music education and piano pedagogy are still relatively undeveloped. Students participating in USMCE exams have the opportunity to discover and develop their musical talents to the highest level.

⁵⁶ Laura Richie and Aaron Williamon, Measuring Distinct Types of Musical Self-efficacy, *Psychology of Music*, 2011 39: 328, London: Sage Publication, Society for Education, Music and Psychology Research, Accessed 2 December 2017.

Bibliography

- Associated Board of the Royal Schools of Music, Making Music: Teaching, Learning, & Playing in the UK, A Collaborative Research Project, ABRSM, September 2014, Accessed 1 November 2017. <https://us.abrsm.org/en/making-music/4-the-statistics/>.
- Associated Board of the Royal Schools of Music, Making Music: Teaching, Learning, & Playing in the UK, A Collaborative Research Project, ABRSM, September 2014, Accessed 1 November 2017. <https://us.abrsm.org/en/making-music/3-executive-summary/>.
- Associated Board of the Royal Schools of Music, Making Music: Teaching, Learning, & Playing in the UK, A Collaborative Research Project, ABRSM, September 2014, Accessed 1 November 2017. <https://us.abrsm.org/en/making-music/5-behind-the-statistics/>.
- Bugos, Jennifer, and William Lee, "Perceptions of Challenge: The Role of Catastrophe Theory in Piano Learning." *Music Education Research* 17, no. 3, September 2015.
- Chiodo, Patricia, Assessing a Cast of Thousands: Assessment Tools Can Provide Quick Recording, Fit into Instructional Time, and Streamline Individual Grading, Allowing Music Teachers to Grade Efficiently and Effectively. *Music Educators Journal*, 2001.
- Conservatory Canada, Syllabi for Piano, 2017, Accessed 3 December 2017. <http://conservatorycanada.ca/wp-content/uploads/2017/07/Levels-1-10.pdf/>.
- Dumlavwalla, D. T, *Approaching the Examiner's Chair: Chronicling the Experiences of Piano Examiner Apprentices for the Royal Conservatory of Music*, 2001. <https://search-proquest-com.www2.lib.ku.edu/docview/919730002?accountid=14556/>.
- Holmes, Ivan, and Diana Davis, Graded Music Examination: What do the Reports tell us? Proceedings of the 27th World Conference of the International Society for Music Education 16-21 July, Kuala Lumpur, Malaysia, 2006.
- Johnson, Peter. "Performance as Experience: The Problem of Assessment Criteria." *British Journal of Music Education* 14, no. 3, 1997: 271-82. doi:10.1017/S0265051700001248.
- Richie, Laura, and Aaron Williamon, Measuring Distinct Types of Musical Self-efficacy, *Psychology of Music*, 39: 328, London: Sage Publication, Society for Education, Music and Psychology Research, 2011.
- Matthay, Tobias, and Harold Craxton and Felix Swinstead, *Approach to Music*, Book 1 "How do you do. Mr. Piano?" by Tobias Matthay, London: Boosey & Hawkes, 1941.
- Matthay, Tobias, *First Light on Piano Playing*, London: Boosey & Hawkes, 1940,
- Matthay, Tobias. *The Visible and Invisible in Pianoforte Technique, Being a Digest of the Author's Technical Teachings up to Date*. London: H. Milford, Oxford University Press, 1932.

- Matthay, Tobias, 1858-1945. *The Fore-arm Rotation Principle In Pianoforte Playing: Its Application And Mastery*. Boston: Boston Music Co., 1912.
- Matthay, Tobias, 1858-1945. *Relaxation Studies In the Muscular Discriminations Required for Touch, Agility And Expression In Pianoforte Playing*. London: Bosworth, 1908.
- Matthay, Tobias, 1858-1945. *The Act of Touch In All Its Diversity: an Analysis And Synthesis of Pianoforte Tone-production*. New impression. London: Longmans, Green and co., 1916.
- May, Brittany Nixon, "A Survey of Early Childhood Public School Music in the District of Columbia: Assessing Content and Teacher Preparation.", The University of Utah, 2015.
- McPherson, Gary E, Davidson, Jane W, Faulkner, Robert, *Music In Our Lives, Rethinking Musical Ability, Development & Identity*, New York: Oxford University Press, 2012.
- Montefiore, Clarissa Sebag, "Why Piano-mania Grips China's Children", *BBC*, 21 Oct 2014, Accessed 20 October 2017. <http://www.bbc.com/culture/story/20131022-piano-mania-grips-china>.
- Mahamuti, Gulimina, "Piano Study in Twenty-First Century China," *Clavier Companion*, Vol 5, No. 2, March/April 2013, 44-50.
http://www.gulimina.com/uploads/6/8/1/4/6814450/_piano_study_in_twenty-first_century_china_clavier_companion_201303-04.pdf.
- Prater, Pamela Jo. "A Comparison of the Techniques of Piano Playing Advocated by Selected Twentieth Century Pedagogues." The University of Texas at Austin, 1990. <https://search-proquest-com.www2.lib.ku.edu/docview/303920717?accountid=14556/>.
- Reid, Mary. "Music Assessment Collaboration Model for Secondary Music Teachers." University of California, Los Angeles, 2005. <https://search-proquest-com.www2.lib.ku.edu/docview/305033457?accountid=14556/>.
- Scutt, S, and Jane W. Davidson, "Instrumental Learning with Exams in Mind: A Case Study Investigating Teacher, Student and Parent Interactions Before, During and After a Music Examination", *British Journal of Music Education* 16,1999, 79-95.
- Smith, Scott McBride, *U.S. Music Certification Exams Skills Book, Diamond Edition: Pre-Grade 1, Grade 1, Grade 2, Grade 3, Grade 4, Grade 5, Grade 6, Grade 7, Grade 8, Grade 9, Grade10*, Novus Via Music Group Inc, 2010.
- Smith, Scott McBride, *U.S. Music Certification Exams Technic Book, Diamond Edition: Pre-Grade 1, Grade 1, Grade 2, Grade 3, Grade 4, Grade 5, Grade 6, Grade 7, Grade 8, Grade 9, Grade10*, Novus Via Music Group Inc, 2010.

Smith, Scott McBride, *U.S. Music Certification Exams Performance Book, Diamond Edition: Pre-Grade 1, Grade 1, Grade 2, Grade 3, Grade 4, Grade 5, Grade 6, Grade 7, Grade 8, Grade 9, Grade 10*, Conservatory Canada, Novus Via Music Group Inc, 2015.

Statista, Accessed 20 October 2017. <https://www.statista.com/statistics/452772/number-of-pianos-sold-in-the-us/>.

Stone, Ruth M., ed. "Volumes of The Garland Encyclopedia of World Music." *Garland Encyclopedia of World Music, Volume 3*, New York: Taylor & Francis Group. Routledge, 1997.

The Royal Conservatory, Guide to Examinations, RCM, Accessed 1 November 2017. <https://www.rcmusic.com/learning/about-our-program/start-here-introduction-our-certificate-program>.

Thompson, Sam, and Aaron Williamon, Evaluating Evaluation: Musical Performance Assessment as a Research Tool, *Music Perception*, Fall 2003, Vol. 21, No. 1, 21–41.

Trinity College London, The International Exam Board for the Performing Arts and English Language, Accessed 1 November 2017. <http://www.trinitycollege.co.uk/site/?id=6>.

USMCE Teacher Training Manual, Copyright pending.

Uszler, Marianne, and Stewart Gordon and Scott McBride Smith, *The Well-tempered Keyboard Teacher*. 2nd ed. New York: Schirmer Books, 2000.

Zhang, Boyu, Industrialized Music Education in China: A Discussion of the “Standard Grade Examinations in Music” (SGEM) Organized by the Central Conservatory of Music, Beijing, Helsinki Collegium for Advanced Studies, Finland, Vol 21, 2016, 103–120.