

ATHABASCA UNIVERSITY

A GROUNDED THEORY STUDY FOR THE CONVERSION OF APPLIED PIANO
COURSES AT THE GRADUATE LEVEL TO ONLINE ENVIRONMENTS

BY

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Approval of Thesis

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“A Grounded Theory Study for the Conversion of Applied Piano Courses at the Graduate Level to Online Environments”

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To Malena: mother, friend, champion, and maverick.

To Margarita Covarrubias, Pilar Vidal, Monique Rasetti, and Francisco Viesca: dear teachers and mentors whose selflessly, patiently, and passionately taught me the art of piano performance

To my beautiful children Aurora and Sergio

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Abstract

The rapid development and implementation and/or conversion of face to face graduate programs to online delivery have broadened educational opportunities in various professions ranging from business to nursing. Music is no exception. Universities across the United States offer online degrees in Music Education. However, there is still yet to see Music Education degrees offered fully online in Canada and even more so, performance degrees offered fully online in North America. The purpose of this qualitative study was to develop a series of propositions that may be useful to instructional designers when working on the development and/or conversion of applied piano courses, in the Piano Performance Master's Degree, to online environments. The tradition of inquiry used in this study was grounded theory. Seven interviews were conducted and, data was analyzed following the three phases of coding. The findings of this study were 13 categories connected in three themes: (1) applied piano one-on-one lessons, (2) possible barriers, and (3) environmental constraints. The results of this study provide a starting point towards the design of effective strategies for the development and/or conversion of applied piano courses and indicate the need for further research.

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Chapter I. Introduction

Applied piano instruction has been delivered for many centuries following the apprenticeship model, known by musicians as the conservatory model (Burwell, 2005 in Bautista, Del Puy & Pozo, 2009, p.86). Under this scheme, among other things, learners are to develop reproductive and productive skills (Romizowski, 1999) with the close guidance of a master-pianist. That is, learners develop a set of guidelines and strategies that will allow them to choose and even to adapt a psychomotor skill in order to solve the problem at hand to perform effortlessly a composition and to make interpretative decisions. In such cases individuals are not just reproducing the skill but producing the skill (Romiszowski, 1999, 460).

One could see many advantages of this model in the initial and early advanced stages of applied piano instruction. Learners are closely monitored by their master-pianist. Any errors or misperceptions on how to execute a skill are rapidly identified and corrected by the master-pianist. The close bond between learner and master-pianist enables personalized learning as the master-pianist will select repertoire, dexterity and coordination exercises, pace of instruction, and repertoire's level of difficulty based on the learner's current level of psychomotor skill, knowledge (harmony, analysis, history) and the outcomes to be achieved. Finally, the master-pianist will coach the learner with regard to deliberate practice and performance preparation.

Graduate programs in piano performance are offered only face-to-face at major universities across Canada. The applied piano course of such programs is delivered following the conservatory model. Unlike other professions, pianists interested in

pursuing graduate studies in performance may consider the reputation and career of faculty members as the determining factor when choosing a graduate program. This may pose a major barrier to access to higher education. Prospective students may have limited opportunities to move from their cities to study with a specific master-pianist. Family and financial concerns may be also important factors. Pianists usually develop their careers as performers and as independent instructors/coaches. Therefore, putting on hold an independent Studio, losing probably the main source of income, may be the biggest factor to consider.

On the other hand and within the context of Western classical music, there are numerous music subjects and programs that are currently taught completely online or in a blended mode of delivery in the United States. Graduate degree programs in Music Education are offered in nine US universities fully online (Groulx & Hernly, 2010, p. 60). Various music theory courses and music history courses are also offered fully online or in a blended modality in various US universities for undergraduate and for graduate levels. There are also numerous web sites that offer applied instruction for amateur musicians, and music subjects as well, employing a variety of technologies (web conferencing via Skype, streaming video, podcasts, ICT). These offerings of applied piano instruction seem to focus on the development of what one could call repertoire-bound reproductive skills. That is, learners will develop a limited core set of skills that would enable them to execute a very specific type of repertoire (chord-based for example). From an instructional perspective such offerings attempt to replicate the face-to-face conservatory model of applied piano mediated through technology. There is still yet to see online delivery of applied piano instruction at the graduate level.

Literature on online learning in music shows that the concerns addressed have been mainly about its technological limitations and its effectiveness. Webster (2011) asserts that “we need more substantial studies on teaching strategies that use technology, issues of gender and technology, equity and accessibility to the best resources and the real effect of technology’s use on long term learning for professional musicians.” It seems that the design of music courses and entire graduate programs online seemed to have outpaced necessary research to “effectively articulate inherent issues and deliberate the pros and cons of prospective practices that might serve to ensure its effective implementation” (Hebert, 2008).

A graduate degree in piano performance delivered fully online could potentially bring down barriers to access to higher education. It could be an option for those professionals who wish to further their education and need to continue fulfilling their family and work responsibilities.

The purpose of this grounded theory study was to develop a series of propositions that may be useful to instructional designers when working on the development and/or conversion of applied piano courses at the graduate level to online environments.

Statement of the Problem

Applied piano courses, at the master’s degree level, continue to be delivered through the conservatory model. The role of the master-pianist as well as the strategies of instruction for applied piano, in face-to-face environments, from the beginner to early advanced level, have been heavily documented in piano pedagogy books, passed on from generation to generation and disseminated through workshops and conferences. There

seems to be a gap in documentation and dissemination with regard to what goes on in graduate applied piano courses.

One could argue that what goes on during a session at the graduate level is dependent entirely on the master-pianist teaching style, the learners' depth of musical knowledge, and the reproductive and productive psychomotor skills the learner may need to develop to perform effortlessly a composition. These may pose unique challenges to course designers when attempting to transfer a graduate applied piano course to online environments. One challenge is with the instruction and development of productive and reproductive psychomotor skills in an online environment. A second challenge is with the master-pianist ability or readiness to deliver the applied piano course online. Lastly, a third challenge lies on finding useful information about how face-to-face applied piano courses are conducted.

Research on applied music instruction in online environments is scarce and primarily concerned with its effectiveness. In his dissertation, Dye (2007) addressed applied music instruction in an online environment. Dye's primary concern centered on possible similarities or differences on student-teacher behaviour in a traditional face-to-face environment compared to that in an online environment. Dye's referred to videoconferencing through the internet as online environment. Dye's dissertation results suggest that online applied music lessons can be as effective as face-to-face instruction. Deverich (1998) addressed as well the delivery of applied music lessons, in particular violin lessons, in a distance environment. In his dissertation, Deverich concluded that distance education is as effective as face-to-face environment. Both authors based their

dissertation on the current face-to-face model of instruction known as conservatory model.

On the other hand, the amount of research on the development and instruction of psychomotor skills in online environments seems to be spread across various disciplines as well as to be miniscule compared to other areas of research in distance education.

Davis, Howell, and Petrie (2010) summarized the trends in distance education scholarship from 1998 to 2007. The authors argue that there has been a decline in the study of the design and pedagogy of Distance Education. They also noted that only a “couple of graduate student studies each year focused their research on theory development or exploration” (Davis, Howell, & Petrie, 2010 p.49). Finally Davis, Howell, and Petrie (2010) assert that most graduate level research has been descriptive. Lee, Driscoll, and Nelson (2004, p. 225) conducted a study with the purpose to examine research topics, methods, and citation trends in Distance Education through content analysis. The authors narrowed their study to the analysis of content of four peer-reviewed journals on Distance Education from 1997 to 2002. Lee, Driscoll, and Nelson (2004, p.237) argue that “practices that reflect educational and psychological theory have rarely been found in distance education journals.” They also indicate that such studies have been restricted to descriptive case studies which in turn, limit the application of findings to those researchers and practitioners that may be involved in similar projects.

Hence, research on theory development or exploration on the systematic development of reproductive and productive psychomotor skills specifically in applied piano at expert level in online environments as well as research on applied piano

instruction (structure, effectiveness, role of the master-pianist) at the graduate level in face-to-face environments is sorely needed.

The design of music courses and entire graduate programs online in music education seemed to have outpaced necessary research to “effectively articulate inherent issues and deliberate the pros and cons of prospective practices that might serve to ensure its effective implementation” (Hebert, 2008). This study will provide to the field of Distance Education an initial series of propositions to be considered when developing online applied piano courses with respect to instructional and curricular design aspects, and the role of the master-pianist as an online facilitator. It will provide to the field of Piano Pedagogy a framework for an alternate model of instruction based on current learning and instructional theories at the graduate level that may be also useful to other disciplines with a strong emphasis on the development of reproductive and productive skills. Lastly, it will contribute with suggestions for further research.

The purpose of this grounded theory study was to discover a series of propositions that may be used to guide the development and/or conversion of graduate-level applied piano courses in online environments.

Central question

What components of advanced applied piano instruction in a traditional face-to-face environment do master-pianists consider must be included in online environments?

Sub-questions.

What are the goals of graduate level applied piano instruction?

What core psychomotor skills are required to undertake graduate studies?

What psychomotor skills will be developed during the graduate program?

What would it need to be in place for face-to-face master-pianist to teach online?

Are there any aspects or topics that could be taught in a group setting?

Are there any aspects of the practice of skills that would benefit from a peer-mentor model?

Theoretical framework

Learning is concern with answering questions related to the nature of knowledge and how individuals come to know (Driscoll, 2005 p.10). Because theorist have taken opposing positions while attempting to answer the above questions, it is prudent to establish how learning is understood within this study. Firstly learning in this study is restricted to formal settings. That is, learning will be seen as the conscious desire of an individual to develop new skills or create knowledge and enrolling in a course of studies as the means to achieve it. Secondly, learning is understood as a change in human performance triggered by a series of designed experiences to which a learner is exposed.

Driscoll (2005, p.8) asserts that a theory is a construct that provides a conceptual framework for making sense of the data that have been collected so far. Therefore, learning theories describe how learning may happen (Driscoll, 2005, p. 23)

It seems that authors on piano pedagogy have mainly focused their efforts on the prescriptive and practical aspects of applied instruction under the conservatory model (apprenticeship) rather than systematic attempts to describe how learning to play the piano may happen. Hence, the perspective adopted in this framework is rooted on the reflective process I have engaged as an applied piano instructor for over 20 years, as an applied piano learner for 16 years (childhood, adolescence, and adulthood), and the knowledge gained through informal and formal studies in education.

In this study the learning and development of the skills required to play the piano will be understood through the constructivist learning theory. Constructivism rests on the premise that individuals create, construct their own knowledge as they attempt to make sense of their experiences (Driscoll, 2005, p. 387). Hence, applied piano studies can be described as an experience where the learner is constantly trying to make sense of the score in his/her attempts to translate its content into sound. This process can be artificially organized in three dimensions: (1.) Technical, which refers to the development of psychomotor skills; (2.) Cognitive, which refers to the understanding of the musical language (notation, rhythm, harmony, analysis), development of aural and sight reading and singing skills, and understanding of the features of styles in music throughout history; (3.) Affective, which refers to the development of skills required to perform adequately in a variety of environments with confidence and focus. Each dimension is intertwined with the other two. Hence, the learning process may be seen as recursive and multi-layered where the attainment of one skill will elicit the development of another one, from either a different or the same dimension with varying layers of depth, until an effortless performance of the composition is achieved.

Because Driscoll (2005, p.386) asserts that there is not a single constructivist theory of instruction but the articulation of various aspects of constructivism by researchers from various fields of science and psychology, it may be possible then to design applied piano instruction considering various methods such as problem-based learning, collaborative learning, hypermedia, open-ended environments, and debates.

Delimitation of the study

The study is constrained to the views of master-pianists that are currently instructing undergraduate and graduate piano students in the province of Alberta either privately or in an academic institution such as a university or conservatory as well as master-pianists that have been guest clinicians in the Province of Alberta.

Limitations of the study

The background of the participants may vary greatly due to the fact that studies in piano performance and pedagogy are offered in a variety of formats. The potential participants of the study may have either earned doctoral degrees from universities or diplomas from conservatories or boards of examination. The focus and emphasis, whether on performance or pedagogy, as well as the degree of liberal education received from each institution by each participant may be different. Hence the participants' teaching skills, computer literacy as well as formal knowledge on instructional and learning theories may vary greatly. Observing and/or videotaping lessons will be possible only when permission is granted by both the student and master-pianist. Finally the study data collection phase is constrained to a time frame from September to December or January to June as this is the traditional calendar followed for instruction.

Definition of Terms

1. Applied piano instruction. Semi-structured one-on-one sessions where individuals acquire and develop the necessary skills to effortlessly perform musical works at the piano within the classical western tradition.
2. Advanced level of playing. Ability to appropriately and effortlessly perform musical works that require mastery in psychomotor skills (involving dexterity,

control, independence and balance); comprehension of the score (that includes simultaneously three voice parts); and an understanding, and ability to apply the underlying performing practices associated to the work in question.

3. Technique. Development of specific reproductive and productive psychomotor skills
4. Interpretation. The ability to appropriately translate music notation into sound when performing a work of classical music.
5. Theoretical background. Knowledge on music related subjects such as rudiments, harmony, analysis, and history within the western classical music tradition.
6. Online learning. Planned learning that occurs at a different time and place from teaching that is mediated through the internet.
7. Educational technology. The facilitation of learning using appropriate hardware and software.
8. Knowledge. It is what an individual is aware of. What the individual knows about something.
9. Skill. What an individual can do, execute, with a degree of effectiveness or any other measure of its quality. Skills can be classified based on the portion of the cognitive, motor, or emotional requirements to its execution.
10. Piano Pedagogy. Term used by master-pianists to refer to the instruction of piano. Historically, the term stemmed from the fact that instruction at the beginner level has been mainly provided to children.

Chapter II. Review of Related Literature

There were no graduate programs in applied piano delivered online at Canadian and U.S. Universities at the time this study was conducted. Hence, there was no literature that provided direction as to what to consider when designing/converting face-to-face applied piano courses to online environments. Based on the above it was prudent to investigate:

1. What is known about instruction of psychomotor skills, both reproductive and productive in face-to-face and online environments
2. What is the place of applied piano instruction within the educational system
3. What is known with regards to the apprenticeship model in applied music instruction
4. What is known about the nature of applied piano as a subject matter
5. What is known about the instruction of applied piano in online environments
6. What is known about face-to-face course conversion to online environments

The review of the literature is presented below in sections that address the above themes of investigation with their respective summary.

It is important to note that even though applied piano is a rich physical experience, literature from the point of view of a systematic process to develop psychomotor skills stems from preindustrial apprenticeship and performance in sports. For that reason the literature about psychomotor skills presented below is from a general perspective that could be transferred to applied piano.

Instruction of psychomotor skills


Motor learning can be understood as a mind-body process, a function of physical maturation (Kurtz, 2007, p.16). The research and instruction of the psychomotor domain can be comprised in two lines of research. One of these lines of research is associated with the preindustrial apprenticeship model. In this model masters would delegate and supervise apprentices in the performance of tasks. Hence, learning happened as a result of feedback from the master and reflective thought from the apprentice as to why the task was performed successfully or not (in Romiszowski, 1999 p. 461). Cognitive learning theory has reviewed and popularized such paradigm into what is now known as cognitive apprenticeships and situational learning. The second line of research is associated with the notion that the performance of a physical activity can be measured through valid and objective indicators such as speed, productivity, and error rate.

For a long time research focused on the acquisition of simple movements or sequences of simple repetitive steps. Later, the work by Poulton (in Romiszowski, 1999, p. 462) in the context of sports identified two types of tasks: the closed task and the open task, where the open task requires constant adjustment in response to an unpredictable and variable environment while the closed task provides an automated or repetitive response to a stable environment. A similar distinction was presented by Wellens (in Romiszowski, 1999) in his industrial context-based research. Wellens argued the importance of what he called planning or strategy skills. In this type of skills, also referred to as productive skills, the performer produces a situation-based response.

According to Romiszowski (1999) the learning of psychomotor skills can be classified in a continuum. At one end of this continuum are reproductive skills. These

psychomotor skills involve activities that are largely repetitive and automatic. A given procedure is repeated over and over every time the psychomotor skill is performed. Such procedure may be comprised by a series of finite steps, making it algorithmic in nature. The type of knowledge used when performing reproductive psychomotor skills is procedural. At the other end of the continuum are productive psychomotor skills. These skills involve the use of strategic knowledge. That is, a decision making process takes place in order to perform the psychomotor skill. Such process is heuristic in nature. Romiszowski also pointed out that a second dimension comprised of cognitive, affective (what he called reactive) and interpersonal domains are required in a greater or lesser amount for competent performance of psychomotor skills. He argued that any type of skill, not only psychomotor, can be described as well as reproductive or productive based on the complexity of its required cognitive processes. He defined skill “as the capacity to perform a given type of task or activity with a given degree of effectiveness, efficiency, speed, or other measure of quantity or quality.” The diagram below shows Romiszowski’s skills continuum.

Table 1. Adapted from Romiszowski’s Skills Continuum

		Cognitive skills	Psychomotor skills	Affective skills (reactive)	Interpersonal skills
Reproductive skills  Productive skills	Procedural knowledge	Using a familiar procedure to a known category. Ex. Adding, writing a sentence following grammatical rules	Repetitive physical skills. Ex. Changing gear, typewriting, pouring liquids	Conditioned habits. Ex. responding, attending Social habits, conditioned response.	Ex. good manners, replying with a pleasant tone
	Strategic knowledge	Solving a new problem Ex. proving a theorem, writing creatively	Planning how to go about performing a skill. Ex. soccer match, performing music, road sense.	Personal control skills Ex. self-actualization	Interpersonal control skills Ex. leadership, discussion, salesmanship, persuasion

Romiszowski also developed a hierarchical model of skill development that is based on the research done by its predecessors Seymour's mastery of industrial skills, Schmidt's schema-theory model of motor skills learning as well as on the accounts by Adler on sports activities and Genther on typing. Romiszowski's model is comprised of five stages:

Stage 1: Knowing what should be done

Stage 2: Execution of actions in a step-by-step manner

Stage 3: Developing kinesthetic control

Stage 4: Automatizing the execution of the skill

Stage 5: Applying the skill to a continually greater range of situations or contexts

According to Romiszowski, the instructional method for the stages described above is comprised of three steps:

1. Delivering core knowledge content
2. Demonstration of the skill
3. Development of proficiency

Step three is particularly of interest when developing productive skills. Because a complex skilled activity involves both reproductive and productive skill elements, systematic skill training requires a detailed task analysis to determine how and in which sequence these reproductive and productive elements may be best taught.

Authors from diverse fields argue the need for more research on analysis of tasks in which psychomotor skills are an essential component in order to design effective instruction.

Ferris and Aziz (2005) propose a taxonomy of outcomes for the psychomotor domain, based on Bloom's work, for a higher education program in engineering. The authors assert that their work has "interpreted the concept of psychomotor domain [as to] the development of manual skills associated with the performance of the professional responsibilities" (Ferris and Aziz, 2005, p 5) of the soon to become electrical/electronic engineers. They also proposed a core set of specific psychomotor tasks to be performed in laboratories (such as wiring, handling of semiconductor devices, operating of electronic and electric equipment). Ferris and Aziz (2005, p 5) stressed the importance of designing the practical work component of engineering programs "in a coherent way to provide experiences that lead to target levels of competence for [specific] practical skills." The authors concluded that a framework to design instruction based on a taxonomy of outcomes for the psychomotor domain will enable a more efficient use of laboratory time and instructional resources in engineering programs.

Ahmed, Naqvi, and Wolhagen (2005) provided a list of required core psychomotor skills for the undergraduate program of medicine in Pakistan. Their work emerged as a response to a growing concern amongst the medical community with the lack of congruence between the teaching and assessment of clinical skills. R. Ahmed et al. (2005, p. 6) assert that faculty of the undergraduate program of medicine may not have clarity and consensus on core clinical skills due to the "limited information available in the literature" with regards to the instruction of psychomotor skills in the medical field.

With regard to analysis of tasks to play the piano there is a variety of sources that describe in detail specific movements to achieve a desired sound or to develop a desired skill. Suchoff (1961, p. 7) describes two streams of piano playing “on one hand we have the exponents of pressure touch in which the key is never struck, only pressed down by the pre-contacted fingertip. On the other hand are the advocates of key attack, the so-called percussive touch, in which the key is struck down from a height.” Gerver (1970, p. 385) asserts that “he [Franz Liszt] did lay down a general guide for the acquisition of technical facility together with some exercises for its achievement.” Cremaschi and Book (in Conklin, 2011) in a qualitative study assert that piano teachers often rely on informal sources of knowledge, to guide their instruction, which include intuition, tacit knowledge, self-examination and strategies that have worked on themselves. They also argued the need for piano pedagogy programs to include instruction on how to conduct research in music education.

Authors have been also concerned with identifying methods that best provide the conditions under which learning goals are most likely to be achieved (In Driscoll, 2005, p. 352). Khadjooi, Rostami, and Ishaq (2011) applied Gagne’s events of instruction to teach a routine medical procedure: insertion of a peritoneal [ascetic] drain. Weidner and Popp (2007) assessed the effectiveness of formal peer-assisted learning on the performance of psychomotor skills in athletics and found that peer-assisted learning appears to be a valid method. Fadde (2009) describes a sports training program based on expert theories to develop recognition skills. In this work Fadde (2009, p 369) asserts that designing a recognition training program involves four-steps: locating the recognition aspect of a reaction performance skill, devising tasks to test and/or train the recognition

sub-skill, conducting a systematic recognition training program, and enhancing and evaluating transfer of training using performance-based tasks. In applied music instruction, Heavner (2005, p. 170) developed what she calls a comprehensive musicianship curriculum model. This model, based on Gestalt psychology, stems from an attempt to integrate and synthesize all areas of music into a unified whole. The model consists of five categories: concepts, content, activities, instructional literature, and evaluation. Siebenaler (1997, p. 6) focused his efforts on identifying and describing effective applied piano instruction under the apprenticeship model. In his research, Siebenaler (1997) interviewed students and teachers, and video-taped applied piano private lessons. He noted the lack of agreement amongst the experts regarding which lessons were most effective and therefore the lack of a universally agreed upon set of standards that would indicate effective instruction.

On the other hand, the amount of research on the development and instruction of psychomotor skills in online environments seems to be miniscule compared to other areas of research in distance education. Davis, Howell, and Petrie (2010) summarized the trends in distance education scholarship from 1998 to 2007. The authors argue that there has been a decline in the study of the design and instruction of Distance Education. They also noted that only a “couple of graduate student studies each year focused their research on theory development or exploration” (Davis, Howell, & Petrie, 2010 p.49). Finally Davis, Howell, and Petrie (2010) assert that most graduate level research has been descriptive. Lee, Driscoll, and Nelson (2004, p. 225) conducted a study with the purpose to examine research topics, methods, and citation trends in Distance Education through content analysis. The authors narrowed their study to the analysis of content of four peer-

reviewed journals on Distance Education from 1997 to 2002. Lee, Driscoll, and Nelson (2004, p.237) argue that “practices that reflect educational and psychological theory have rarely been found in distance education journals.” They also indicate that such studies have been circumscribed to descriptive case studies which in turn, limit the application of findings to those researchers and practitioners that may be involved in similar projects.

The above paragraphs may be explained by the fact that research found on psychomotor skills and online learning is spread across various disciplines. This and time constraints to perform an exhaustive search of articles in this area for this study are factors that may prevent an accurate portrayal about its true state of research. White (2010) developed a stereoscopic video system to be used in the instruction of complex psychomotor skills online. In his dissertation, Dye (2007) addressed applied music instruction in an online environment. Dye’s primary concern centered on possible similarities or differences on student-teacher behaviour in a traditional face-to-face environment compared to that in an online environment. Dye’s referred to videoconferencing through the internet as online environment. Dye’s dissertation results suggest that online applied music lessons can be as effective as face-to-face instruction. Deverich (1998) addressed as well the delivery of applied music lessons, in particular violin lessons, in a distance environment. In his dissertation, Deverich concluded that distance education is as effective as face-to-face environment. Both authors based their dissertation on the current face-to-face model of instruction known as conservatory model. Hence a discussion of the impact on the systematic development of reproductive and productive psychomotor skills in online environments is not addressed.

Summary.

The instruction of psychomotor skills has been an area of interest to researchers. It seems that most of the research findings have been largely applied to sports and workplace instruction. Applied piano instruction could benefit from such findings, mostly from the sequencing of instruction of psychomotor skills. There also seems to be a gap in the literature with regards to research concerned with the development of reproductive and productive psychomotor skills in both distance education and applied piano.

Finally, Romiszowski's work may be, in addition to the above, relevant to the field of applied music due to the fact that his taxonomy of outcomes "bridges the affective and cognitive domains" with the psychomotor (Anderson & Krathwohl Editors, 2001, p.270).

Music instruction and higher education

The study of music has been treated in a peculiar manner as it can be observed in the history of western classical music. The first record of music instruction found comes from Europe in the 14th Century. Pope Gregory the Great founded the Schola Cantorum. Its members included monks, secular clergy and boys. A few other music schools were founded over the next centuries by the Church. Well Cathedral School in England (in 909), Saint Martial School at Abbey of Saint Martial, Limoges (10 to 12 Century) and the Notre Dame School at the Cathedral of Notre Dame in Paris (late 12 early 13 Century). The purpose of such instruction was utilitarian. That is, to prepare singers to perform sacred chants for liturgical events and composers to provide new music to mark important dates of the religious calendar (Easter, Christmas) and events (births, beatifications, deaths).

The Congregazione dei Musici sotto l'invocazione della Beata Vergine e dei Santi Gregorio e Cecilia was founded in 1585 by Pope Sixtus V. It hosted some of the most remarkable composers of the time such as Giovanni Pierluigi da Palestrina, and Luca Marenzio. Over the centuries, the Congregazione underwent several transformations which were reflected in changes in its name. From Congregazione dei Musici to Pontificia Accademia in 1830 to Regia Accademia di Santa Cecilia in 1870 and to L'Accademia Nazionale di Santa Cecilia after the Second World War.

Music was also taught by parents or through apprenticeships in addition to church schools. Such apprenticeships would start with children as young as eight. The teacher would serve as a mentor. During the 17th century Conservatories started to emerge as a response to the increasing demand for well-trained musicians that apprenticeships were not able to provide fast enough. Such demand was imposed by the development of the Opera. These no-religious schools of music took their name from the Italian term “conservatorio”. In Italy the term referred to “a type of orphanage often attached to a hospital (hence the term *ospedale* also applied to such institutions). The foundlings (*conservati*) were given musical instruction at state expense.” In the 18th Century the fast development of public concerts also contributed to development of Conservatories. The first music school open for the population at large was founded in 1784 in Paris. In 1795 it was renamed as Conservatoire National Supérieur de Musique et d’Art Dramatique and restructured. With the church reducing its involvement in music training due to the closure of Monasteries and Church Music Schools, Conservatories took even a more relevant role in the training of musicians and reached a golden era of development during

the 19th Century. At this point the state, patrons, and societies took charge of the role and responsibilities that the church once had in music training.

Towards the end of the 19th Century Conservatories started to draw a distinction between professional and amateur musicians. Hence various Conservatoires created, besides their central program of studies, special divisions to instruct such amateurs as well as to train teachers mainly in piano and voice to serve the increasing middle class. During this time several factors made the study of piano a core element of the Conservatory curriculum. Such factors were the growing new trend of solo recitals, the increasing prominence of renowned piano teachers and performers in Western Europe such as Anton Rubinstein, Clara Schumann and Franz Liszt; and probably the most decisive factor was the increasing numbers of middle class families owning a piano and in need of instruction.

The growing demand for piano instruction prompted the need of developing uniform methods of instruction in Germany and France. British conservatories focused on developing testing and licensing strategies of teachers.

During the beginning of the 20th Century conservatories were influenced by the general education reforms and expanded their offerings and programs. Conservatories started to display a trend towards standardization of musical pedagogy losing slowly its status of "conservators" of regional styles of performance and composition." Such trend stimulated the spread of the Conservatory as an educational model in North America, South America, Asia and Eastern Europe.

In the USA conservatories started to emerge in the late 1800s. The New England Conservatory was founded with the purpose to serve the growing market of amateur

musicians. During this period various schools of music such as Baltimore's Peabody Conservatory (1857), the Oberlin College Conservatory in Ohio (1865) and the Cincinnati Conservatory were founded as well. Funding came mainly from private patronage. An interest in creating music departments sprang out from Harvard and Yale. These private universities were the first to offer music programs. Soon after, various state universities in Ohio, Indiana, and Illinois, began music programs.

In order to offer wider educational opportunities, links between Conservatories and Universities gained strength during the 20th century. Hence many Conservatories or Music Schools became part of large universities. Noted exceptions are Julliard School of Music and the Curtis Institute which remained as independent institutions to this day.

The study of music in Canada had a strong influence from British models during the late 19th Century. Due to the fact that education in Canada is a provincial responsibility and therefore there is no national education policy, the history of music studies in higher education in the 20th century may be difficult to trace and to portray its impact nationally.

Sir Ernest Macmillan and Arnold Walter, identified as leaders in the music in higher education circle during the 1960s, expressed a concern with the creation of too many university music schools. This concern was based on the premise that "talent is limited, so are opportunities, so are resources" (p. 405). Nevertheless, by 1965, there were about ten institutions awarding professional degrees in music.

Various institutions took as a model the University of Toronto and the Toronto Royal Conservatory of Music. Hence the examination system and diplomas from the Toronto Royal Conservatory of Music were widely used as an admission criteria and

graduation requirement. Such influence was in part because the examination system was a framework universally understood by teachers and students across Canada. In addition to the above developments, Acadia University and Mount Allison University integrated the conservatory programs with which they have had a historical association, and developed a syllabus that prescribed both music and liberal arts. “Attendance at such classes and lessons was understood to be a significant part of the degree program” (p. 406). The model followed by these two universities was a departure from the British model, study limited to music and extramural. It represented a vision of music study in closer alignment with the American trend of the time.

On the other hand, the “first entirely state subsidized institution for the higher learning of music in North America” was founded in Quebec under the name of Le Conservatoire de musique du Quebec a Montreal (CMQ).

During the 1960s, music programs expanded. New programs were open in composition, musicology, music theory and performance. Music studies at a graduate level were open during the 1970s. These graduate programs were rooted in the American model while the British tradition, and European for that matter, continued to be available through Conservatoires.

Concurrent and sequential models for teacher training in music were developed as well by universities for the elementary and secondary levels. Specialized programs in music education were open at the graduate level. These degrees have had their focus in how to teach music in elementary and secondary levels with very little focus on tertiary level.

By 1990 the number of institutions with music programs had quadrupled. The number of academics was around 600 with an additional 1000 part-time instructors. Approximately 150 of academic members are musicologists (ethnomusicologists, theorists, research scholars, etc.).

Over the last fifty years new undergraduate and graduate programs in music have been created. Degrees such as Bachelor of Music in Jazz and Popular music, Master of Music in Performance and Piano Pedagogy, Doctor of Musical Arts in Composition, or Performance or Musicology, or Music Education show an expansion and growth in developing professionals in this field with a set of skills that includes not only performance and instruction but research skills as well. The field has also expanded to include genres such as jazz, pop, and world music in addition to the western classical tradition as part of tertiary level curricula.

Summary.

Music instruction in higher education has its roots in the Conservatory tradition where the apprenticeship model, of the 17th century, has been the main tenet of instruction. In the late 19th century and early 20th century Conservatories were absorbed by Universities and music departments were created. The first generation of academics in music departments most likely had their training in Conservatories which enabled the continuity of the apprenticeship model in higher education. Although an increasing middle class, first in Europe and later in North America, created the need for developing standardized methods of instruction, mainly for piano, such methods were aimed at beginner level (which are usually taken by children and amateur adults) leaving higher education instruction with little or no change. Music departments gradually took on the

responsibility to prepare music instructors for the elementary and secondary levels as well by opening graduate programs in Music Education. Nowadays the field of music in higher education has expanded its horizons beyond the training of performers to embrace historical, theoretical and composition studies not limited to western classical music. However very little change in instructional methods has happen in applied music instruction at any level.

Apprenticeship model

Higher education institutions have additional admission requirements for individuals interested in pursuing a music degree. For undergraduate and graduate degrees such requirements include an audition and a diagnostic exam in theoretical subjects (harmony, analysis, and music history) and aural skills.

For graduate degrees, the audition is aimed at demonstrating a minimum advanced level of playing of western classical music repertoire in the majority of Canadian universities, or in the genre the program specializes in.

Based on the audition repertoire listed in various Canadian universities' websites, one can infer that prospective students are already able to perform complex and advanced works of music. That is, these prospective students have trained for at least 13 years in applied music along with six years of formal study in theoretical subjects.

In Canada such training, before entering university, is most likely acquired through community music schools, private instructors, and private music schools. Such institutions and individuals carry on the apprenticeship model to instruct music. In a narrative study on one-on-one applied music instruction, Duke and Simmons (2006) propose that “[in the apprenticeship model] the [19 common] elements of teaching

appear so consistently, both among lessons and among teachers..., because these elements comprise the highest form of instructional skill in music” The study supports the apprenticeship model by suggesting that “these teachers, all of whom have risen to the very top of our profession, teach the way they do because it is the way that students learn best.” Such argument illustrates the high regard applied music instructors may have for the apprenticeship model to develop expert skills and it probably explains its five hundred years of dominance.

A series of questions emerge from such inclination towards the apprenticeship model. Has this model changed over time? Has it changed in applied music instruction? How do instructors are trained to teach following the apprenticeship model? Have any other models of instruction been explored in applied music in higher education? What is the perception that the instructor has about his/her role in the learning process? Such questions are yet to be answered as literature available on piano pedagogy rather shows a strong focus on the documentation and dissemination of the strategies and teaching methods that outstanding master-pianists have developed throughout their practice as well as the practical aspects master-pianists face in the exercise of their profession.

Summary.

Graduate students in music performance have had previous formal training in music before university studies. Such training has been delivered through the apprenticeship model. These students come to higher education with an already advanced level of performance that took in average 13 years to achieve. Although demonstration of an understanding on theoretical subjects is also part of the admission requirements, one

could argue if such parameters truly provide information about the students' degree of development of productive skills as well as critical and reflective thinking.

Applied piano instruction

Piano instruction has been offered with little change over the past century (Madsen, 1988 in Siebenaler, 1997, p. 6). Instruction relies mainly on demonstration of the skill to be developed by the master-pianist and directing the student as s/he replicates the master-pianist's demonstration. This master-apprentice model, also referred to as 'conservatory model' (Burwell, 2005 in Bautista, Del Puy & Pozo, 2009, p.86), maintains its format of regular weekly sessions where the student shows the progress gained in-between sessions for years and even decades. During the sessions the master-pianist offers feedback, makes corrections, offers advice on possible strategies to reinforce progress and to achieve the goal(s) set for the next session, and offers solutions to problems that the student has not been able to resolve on his/her own, whether psychomotor or related to the understanding of the score.

One could argue that what goes on during a session at the graduate level is dependent entirely on the master-pianist teaching style. There seems to be a gap in the piano pedagogy literature with regards to how sessions can be structured at the graduate level as the literature available in this subject is abundant for earlier levels of instruction. According to the handbook of the National Association of Schools of Music in the US (NASM), graduate studies in performance aim to develop advanced competencies in applied music. Graduate students must gain as well knowledge and skills in one or more fields of music outside the major such as theory and analysis, history and literature, musicology and ethnomusicology, and pedagogy.

On the other hand, the degree of deliberate practice that a student conducts over a seven-day period is crucial for his/her progress and will determine the aspects to be addressed during the weekly sessions. Deliberate practice to attain expert knowledge/level has been studied in various disciplines. Hayes (in Ericsson, 1993 p.366) asserts that it takes an average of 20 years for an individual studying music composition to create a first outstanding work. Hayes also demonstrated that the acknowledged 10 year mark to attain expert level was not just an artifact. Hayes argued that those who started studying music at six years of age or earlier did not write their first eminent composition until 16.5 years later. As Ericsson (1993, p. 368) argues, deliberate practice extends over a period of at least 10 years and “it involves optimization within several constraints” to attain expert levels of performance. Firstly, deliberate practice demands from individuals: time and energy, access to professors, as well as training materials and facilities. Secondly, intrinsic motivation by individuals is required in order to engage in a deliberate practice routine that will last at least a decade. Lastly, deliberate practice is an effortful activity that can be sustained for a limited time each day without reaching exhaustion. Master-pianists advice on how much time of deliberate practice should be spent at the undergraduate level varies. Three hours of deliberate practice per day is suggested to undergraduate students from the School of Music at the University of Utah in the applied piano syllabus. The applied piano syllabus at University of Mississippi indicates that a seven day routine of deliberate practice sessions is highly recommended. The length of the sessions should be between two and a half to four hours. In contrast the syllabus from the Youngstown State University states that “A commitment to daily practice will be expected. Works should be memorized for each lesson, and prepared to

the highest level based on the student's interpretative understanding and technical proficiency."

Deliberate practice plays a paramount role in applied piano studies at any level. Anecdotal accounts assert that one of the main responsibilities of the master-pianist is to teach students how to conduct a deliberate practice session, what is involved, its frequency and length. Literature with this respect can be found in a variety of sources (books, videos, internet pages, blogs) for very specific challenges and levels of complexity. O'Neill (2012, p.5) includes in her book "over 150 specific tips [deliberate practice sessions strategies] that will enliven anyone's practice sessions." She goes on by asserting that these effective strategies have been passed down from generations of master-pianists, from one teacher to another, and from other applied music disciplines. Even though there are studies on the effectiveness of a handful of strategies to be used during deliberate practice sessions, it seems that there has not been a comprehensive and/or longitudinal study yet which primary concern is the effectiveness of such strategies in the development of reproductive and productive psychomotor, cognitive, and affective skills in applied piano studies.

Summary.

Applied piano instruction has been heavily documented from the beginning to early advanced levels of performance with respect to lesson structure and deliberate practice strategies. Such documentation or information seems to be mostly passed from one generation to another of master-pianists. Also, the apprenticeship model has been the preferred form of instruction and its effectiveness has not been contended so far.

Applied music instruction in online environments

In general terms and within the context of Western classical music, there are numerous music subjects and programs that are currently taught completely online or in a blended mode of delivery in the United States. Graduate degree programs in Music Education are offered in nine US universities fully online (Groulx & Hernly, 2010, p. 60). Various music theory courses and music history courses are also offered fully online or in a blended modality in various US universities for undergraduate and graduate levels. There are also numerous web sites that offer applied instruction for amateur musicians, and music subjects as well, employing a variety of technologies (web conferencing via Skype, streaming video, podcasts, ICT). These offerings of applied instruction seem to focus on the development of what I call repertoire bound reproductive skills. That is, the development of a core set of skills that would enable students to execute a very specific type of repertoire (chord-based for example). Therefore the development of reproductive and productive skills at a professional level is not covered. From an instructional perspective such offerings seem to have their foundation on the apprenticeship model mediated through technology.

The design of music courses and entire graduate programs online seemed to have outpaced necessary research to “effectively articulate inherent issues and deliberate the pros and cons of prospective practices that might serve to ensure its effective implementation” (Hebert, 2008). Literature on online learning in music shows that the concerns addressed have been mainly about its technological limitations and its effectiveness. In previous sections I mentioned the dissertations of Dye (2007) and Deverich (2006) which argued that there was no significant difference between face-to-

face applied music instruction and online applied music instruction. Hebert (2007) addressed five key issues in online music teacher education programs. These were prejudice regarding the legitimacy of online music programs, coordination between distance education and music departments, the possible pressure to maximize profits at the expense of educational quality, management of adjunct music instructors, and management of student behavior and provision of student services. This may illustrate the importance of making available to faculty members as much information as possible as to how Distance Education research has proven its effectiveness and its vast pool of studies addressing the same concerns. Hebert's concerns with regards to faculty perceptions about online learning and in which way the role identity of these professionals may be creating barriers to distance education in music merits more research. In his analysis of research in music technology, Webster (2011) asserts that "we need more substantial studies on teaching strategies that use technology, issues of gender and technology, equity in accessibility to the best resources and the real effect of technology's use on long-term learning in music for professional musicians"

Summary.

There is a wide variety of options to learn piano performance in online environments. Such options include streaming video, and web conferencing through skype. Also, these options are aimed at both amateur and pre-professional performers. Undergraduate and graduate programs in applied piano are not offered yet online in Canadian universities. Research on its effectiveness, methods of instruction, and the role identity of the master-pianist is sorely needed.

Face-to-face course conversion to online environments

In many educational institutions the development of online programs takes the form of converting or transferring face-to-face courses to online format (Kampov-Polevoi, 2010). Although such practice is widespread, it has received little research attention (Kampov-Polevoi, 2010). The available literature is prescriptive in nature (Xu & Morris, 2007), and does not address concerns at the course-level development activities by faculty members (Kampov-Polevoi, 2010). The conversion of traditional courses to online format can be approached in two ways. The first is known as the “lone ranger” model. In this model, professors take upon themselves to transfer their own courses to an online format. The second model is known as the collaborative or project-based course development model. Under this model, professors are part of a team in which they take usually the role of subject matter experts. Other members of the team include instructional designers, media developers, and programmers. A comparative study of both models done by Hawkes and Coldeway (2002) concluded that both models can be effective. The effectiveness of each model is dependent on the context as well as the amount of administrative and technological support provided by the institution.

In a study done by Xu and Morris (2007) on the description of the collaborative model, they found that although this model benefits from standardized quality control procedures there were inconsistencies in decision making and disagreements between professors and project managers with regards to content versus form of presentation. On the other hand course conversion done through the “lone ranger” model requires that professors take upon several roles such as instructional designer and media developer. Hawkes and Coldeway (2002) assert that the success of the lone ranger model is

contingent on the professor possessing the requisite skills and knowledge. The table below shows a summary of the advantages and disadvantages of both models as described by Kampov-Polevoi (2010).

Table 2. Course Conversion Models

Model	Advantages	Disadvantages
Lone ranger	<ul style="list-style-type: none"> -Substantial autonomy in development -Feasible with little or no administrative support -Course development has greater flexibility and speed 	<ul style="list-style-type: none"> -Fusion of pedagogical and technical roles - Often experimental
Collaborative	<ul style="list-style-type: none"> -Utilization of a variety of skills -Consistency and quality control procedures available for large scale program development. 	<ul style="list-style-type: none"> -Depends heavily on institutional infrastructure, personnel, administrative and technological policy.

Summary.

The conversion of traditional courses to online format is an area where faculty holds an important role in both models. Research that focuses on the process of course conversion in both models could shed light in how to better support and balance instructional and technological decisions among members of the collaborative model, as well as what kinds of support can be offered to professors converting their courses to online format that ensure quality control and acknowledge their role as the main authors.

Chapter III. Methodology

The purpose of this study was to discover a series of propositions that may be used to guide the development and/or conversion of graduate-level applied piano courses in online environments. Strauss and Corbin (1998, pp. 10-11) assert that qualitative research is a paradigm that “produces findings not arrived at by statistical procedures or other means of quantification.” Qualitative research parts from exploring an issue, group or population in order to gain a thorough understanding of it.

Hence, this paradigm was suitable for this research — aimed at understanding processes, describing phenomena and developing new theory. The strategies of analysis are interpretative in nature. Analysis is done through a non- computational process with the intention of making sense of the data collected, finding concepts and relationships, and then organizing them in tables, matrices, and narrative form.

Investigators can choose from five traditions of inquiry: narrative, phenomenological, grounded theory, ethnography, and case study. Although all five traditions follow a core research design, one tradition may be more suitable than others given the nature of the central question, and the investigator’s philosophical approach and strengths. After gaining an understanding of the specificities of each tradition of inquiry, grounded theory was chosen for this research.

Grounded Theory

Grounded Theory is used when researchers’ main goal is to develop theory (Strauss & Corbin, 1990). In this approach, one parts from the notion that there is a limited understanding of a phenomenon either from the perspective of its processes, actions, or interactions. Such description is congruent with the paucity of research in

face-to-face applied piano instruction and more so in online environments. In this inductive method (Neuman, p.157) theory is grounded in the data. That is, the investigator detects patterns and regularities in the data that may serve to formulate initial hypotheses from which general conclusions, theories, or propositions may emerge. Developing a methodology based on this tradition of inquiry may provide a series of propositions the researcher believes can guide the development of graduate-level applied piano courses in online environments. Grounded theory methodology has suffered several permutations since its development in the 1960s (Mills, Bonner, Francis, 2006 p. 2). One of them is constructivist grounded theory. Mills, Bonner and Francis (2006) assert that “depending on the researcher’s ontological and epistemological beliefs” one variation may be more suitable than other. In this case the researcher has explicitly stated a constructivist view of piano instruction. This is congruent with the work of Strauss and Corbin, and the work of Charmaz in the development of the methodology. Although there may be differences in how each of these authors approaches some of the stages in the methodology they all share an overarching constructivist view.

Data collection

The primary form of data collection in grounded theory is the interview (Creswell, 2007, p. 131) and as such it was the main form of data collection in this study. For this study, a one-on-one interview of ten questions was designed. The questions were open-ended and consideration was given to add new questions based on the information the interviewee provided during the session.

Interview questions

1. In your opinion, what are the goals of advanced applied piano instruction at the graduate level?
2. Based on your experience, what would be the psychomotor, cognitive and affective skills that prospective graduate students must possess?
3. What are the aspects or topics in the applied lesson that are usually left behind due to time constraints that could be delivered online?
4. What would it need to be in place for face-to-face master-pianist to teach online?
5. Are there any aspects or topics of applied piano instruction that could be taught in a group setting?
6. Have you incorporated any type of technology in your teaching (video/audio recording, computers, etc.)? What was or has been your experience?
7. How often do you demonstrate psychomotor skills through physical contact?
8. Would you say that most of the challenges students face at the graduate level when learning new repertoire had to do with the interpretation of the score or a lack of psychomotor development?
9. What alternative or supplementary activities could the student perform to demonstrate proficiency in the execution of a musical work?

The participants of this study were selected based on the purposeful sampling strategy. Under this strategy (Creswell, 2007, p.125) the researcher selects and determines which sites and individuals are most likely to provide data that can be used to provide an answer of the central question of the study. For this study, it was decided to

interview only master-pianists due to the fact that the focus of the study is in gaining a better understating of how face-to-face applied sessions are conducted. Hence the point of view of the master-pianist as the leader in the sessions is paramount. Also, it was decided to conduct face-to-face interviews as much as possible and to conduct phone interviews or by any other media when strictly needed. In this study, participants were selected initially from the membership list of two non-profit professional and trade associations, the Alberta Registered Music Teachers' Association, and the Alberta Piano Teachers' Association, colleges and universities across Alberta, and guest master-pianist clinicians from the United States. A letter informing prospective participants about the study and inviting them to participate was sent to those that have been members or taught for five, ten, 15 or more years and that have prepared students for Royal Conservatory Exams at the advanced level (Grades 10 and Associate Registered Conservatory Teacher Diploma, ARCT) as well as taught at the undergraduate and graduate levels. A positive response from seven master-pianists was received. Six interviews were conducted face-to-face, one interview was conducted via telephone. The average length of the interviews was one hour and fifteen minutes. Although Creswell (2007, p.126) recommends 20 to 30 individuals when conducting a grounded theory study it was decided to only use data from the seven positive responses because the pool from which participants could be drawn is small. The membership of the Alberta Music Teachers; Association is comprised of approximately 145 members from various disciplines including piano, violin, voice, guitar, theory, etc. Most of such members and whose discipline is piano belong as well to the Alberta Piano Teachers Association. In addition to duplication, a fraction of such members provides instruction at advanced levels.

As mentioned above master-pianists were the only individuals to be interviewed. They were informed of the structure of the interview, the type of questions, and that they could leave the interview and stop participating in the study at any time for any reasons without having to disclose such reasons.

Data Recording

Interviews were audio recorded when participants gave their consent. Six of the seven interviews were audio recorded with a digital recording device. Answers provided by the participants for the one interview were written down. The audio recorded interviews were transcribed into index cards. Recorded answers from the interview were re-written into index cards. Any thoughts and observations made by the researcher, after each interview, were recorded in memos.

Data analysis and interpretation

The strategy of analysis that was used is coding. Coding takes place in three phases: initial coding, focused coding, and axial coding. Through these phases the researcher develops categories of information which are later interconnected and finally arranged in a set of theoretical propositions.

The first phase of coding was done one interview at a time. After reading the full interview of a given participant, the researcher performed line-to-line coding considering the below suggested strategies by Charmaz (2010, p. 50):

1. Looking for tacit assumptions
2. Explicating implicit actions and meanings
3. Identifying gaps in the data

Once this initial line-to-line coding was done, data was organized by question with the purpose to find categories through comparison of the different answer, given to the same question by the various participants. The same process of comparison was done with memos.

In vivo codes are words, sentences or expression charged with meaning, actions or processes from a participants' world (Charmaz, 2010, p.57). Such in vivo codes were identified during the analysis of the interviews and are presented in the results section of this document.

A second phase of coding occurs when the investigator starts to use the most significant or frequent codes to explain larger segments of data. This second phase of coding known as focused coding is a "circular process." That is, the investigator will go back to data earlier reviewed and look at it with "fresh eyes" due to the new understanding he/she has of the data. During this phase of coding, 10 categories were developed in this study.

A third phase of coding provides a frame of reference in which links can be established between categories and subcategories (Charmaz, 2010, p.60). This stage of coding is known as axial coding. In this study the links between the 10 categories are presented in three overarching themes.

Validity

In grounded theory studies, matters of validity are addressed by a process where the researcher tries to find evidence that challenges his/her conclusions or that makes such challenge an implausible one. (Maxwell 1996, p.93) There are different strategies that the researcher can use to find such evidence. Two of such strategies were followed in

this study. They are triangulation, and clarifying researcher bias. For the triangulation strategy a variety of sources of information, and methodologies were used. In data triangulation the researcher considered participants that could offer information of the phenomenon from multiple perspectives (Guion, 2002 p. 1). That is, master-pianists from a variety of institutions (universities, conservatories, colleges and private studios) at a different stage in their careers (novice less than five years, mature more than ten years, and expert more than 15 years). In methodological triangulation, the researcher used whenever possible, taped lessons and/or observation, as well as documentation related to piano pedagogy in addition to interviews.

Good research requires making assumptions, paradigms, and frameworks explicit. (Creswell, p. 15). It is the belief of the researcher that her view of the world has been shaped to a greater degree by her experiences as a piano student in formal settings for 16 years, and practice as a performer and applied piano instructor for over 20 years. Such worldview is congruent with the tenets of social constructivism. That is, reality is multiple and subjective, and individuals construct knowledge through a process of accommodation and social negotiation. Such worldview will invariably permeate this research in many ways at different stages. By explicitly providing information about the researcher's interests in pursuing this study, her role within the study, and her background and perspectives as a piano instructor in Alberta, the reader will be able to understand the orientations and approach that shape this study.

Anticipated ethical issues

Issues of inequality of power could possibly arise when selecting participants from a membership list of the professional associations they belong to. Such concern was dissipated by clearly stating to prospective participants that this was an independent study with no connection or relation with the Board of Directors of the two organizations. By stating that this study was done as part of the researcher's Master of Education in DE studies, prospective participants were able to assess the scholarly value of this study and any thoughts of conflict of interest were dissipated as well.

Chapter IV. Results

The results of this research are presented in three sections. Information regarding the interview and participants is provided first. Afterwards, the results of the data analysis are presented by themes. Each theme is presented with a detailed description, a diagram that illustrates the connections between the theme and its categories and codes, and excerpts from the various interviews that support and illustrate the respective theme. Finally a list of in vivo codes with their meaning is provided.

About the interview and participants

During the interviews more topics of discussion and questions emerged in addition to the nine pre-defined interview questions. Such questions are listed below.

Additional interview topics of discussion

- i. Discussing interpretation
- ii. Learner's independence
- iii. Learner's awareness of skills developed
- iv. Teaching through demonstrations vs discussions and critical thinking
- v. Humor in the class

Additional questions

- i. How do you diagnose and prescribe?
- ii. Are there enough opportunities to complete scholarly work while pursuing the degree?
- iii. Are there enough performance opportunities for learners while pursuing the degree?

- iv. Is the master-pianist responsibility to assist students in planning and managing the learning of repertoire?

Seven individuals participated in this study. Six participants were interviewed face-to-face, one via telephone. Six interviews were audio recorded. Some segments in one of these audio recordings were almost inaudible. Finally, one interview was not recorded as per the participant's request.

The following table provides information about the background, and teaching experience for all the participants. Such information was gathered through a biographical questionnaire provided to each participant at the time of the interview.

Table 3. Participants' biographical information

Gender	Male	4
	Female	3
Age	36-40 years old	1
	51-55 years old	1
	56+ years old	5
Musical Education	Area of Expertise: Piano Performance	7
	M.Mus. in Piano Performance	4
	Doctor of Musical Arts	2
Participants Work Environment	Private	5
Main Genre of Instruction	Classical	7
Years of Teaching Experience	20-25 years	1
	30-34 years	2
	35-40 years	1
	40+ years	3
Subjects Taught	Piano Performance	7
	Piano Pedagogy	4
	Theoretical Subjects (Harmony, History)	4
	Other Subjects	2

Only one participant has formal education in psychology and physiology in addition to piano performance.

Themes

Thirteen categories were developed when analyzing the data. These categories are linked or connected in three themes. Each theme sheds light as to the function and processes that either take place in applied piano lessons or that influence or impact the lesson per se. A description of each theme is followed by a diagram that shows the connections between the categories and codes associated to it as well as excerpts of the interviews.

Theme 1: The applied piano lesson is a hub to articulate and apply the learner's knowledge and experiences gained in other subjects through mentoring and coaching.

The master-pianist builds a relationship with the learner that allows them both, to reveal their strengths and weaknesses. The master-pianist reveals through demonstrations, experimentation, dialogue, and sharing of personal anecdotes and professional experiences, his/her understanding and interpretation of the score. These, provide a framework upon which the learner builds, constructs, and develops his/her own understanding and interpretation of the score. The master-pianist takes on different roles, as it is required, to prompt the learner to retrieve and apply his/her prior knowledge in applied piano and other subjects as well as new knowledge gained during the lesson, and other courses through insight, feedback, and lecture-demonstration.

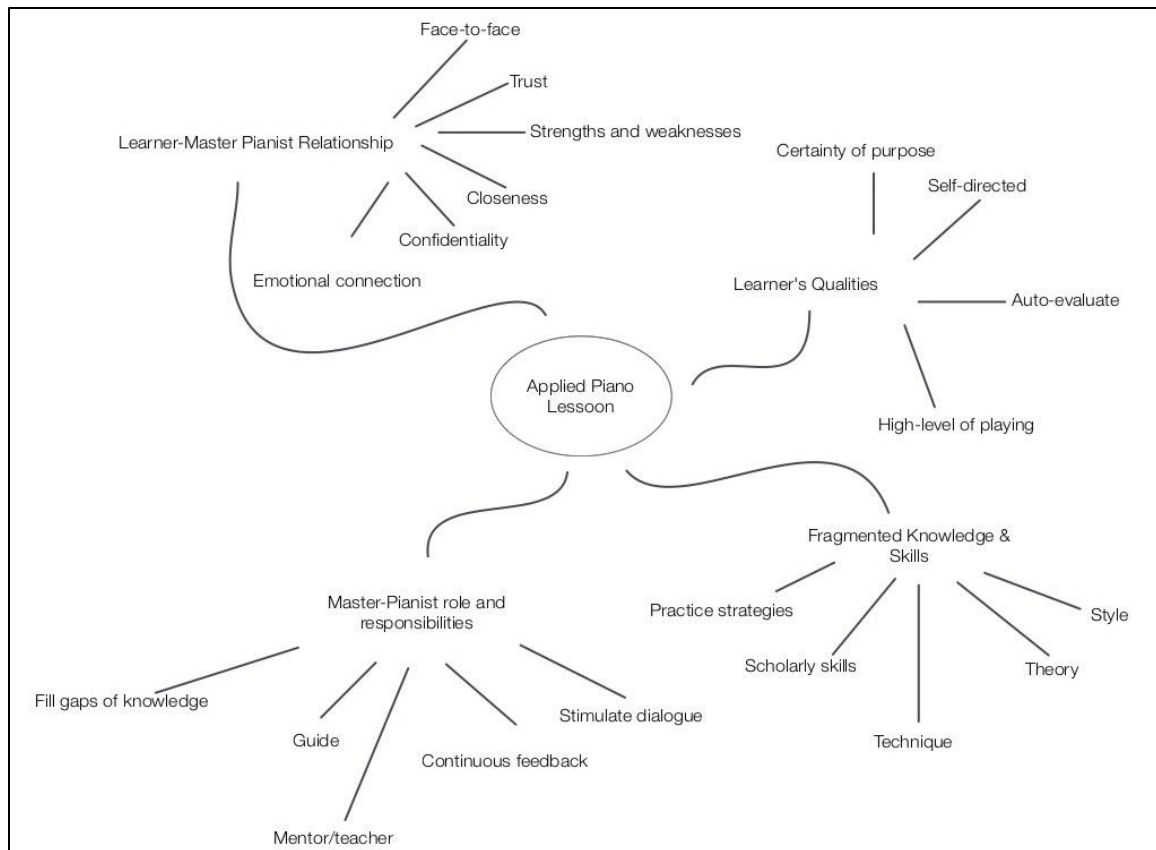


Figure 1. Applied Piano Lesson theme's categories and codes

Interviews' excerpts.

P3: "...it depends on the student, because everybody learns in a different way...So a very intuitive person would respond well with demonstration or to just a suggestion or an idea. An intellectual person needs something explained to them, logically with words, and that helps them." [Associated categories: master-pianist role and responsibilities, Learner's qualities]

"I take several different approaches before I find one that bears fruit. That's when experience is very valuable and having done it many times is very valuable, because people are really are different" [Associated categories: master-pianist role and responsibilities, Learner's qualities, Fragmented knowledge and skills]

P4: “I usually start noticing big results after the second year. They have survived a couple of student recitals in which they realized they are not fatal. They had a summer. They come back and all of a sudden I find quite often that we are friends. Cool!”

[Associated categories: Learner- Master-pianist relationship]

Theme 2: Barriers.

The master-pianist assists learners in developing skills to identify and discriminate nuances when performing. He/she also provides feedback by indicating the possible reasons impeding an effortless performance and suggesting possible solutions. The above is possible due to the close relationship that is built and developed between the learner and the master-pianist. The master-pianist makes use of his/her intuition combined with his/her experience and knowledge to guide the learner in overcoming the challenges to reach an effortless performance. Such challenges can be physical, mental or emotional.

There may be resistance from master-pianists to conduct lessons at a distance because of possible barriers that could hinder or impede him/her to fully assist the learner. Quality of tone and nuances may be lost due to technological limitations as well as not having an opportunity to try the instrument used by the learner. Also “reading” the learner when performing and cultivating a relationship may be diminished. Finally, in many cases the master-pianist relies on demonstrations that require physical contact to get his/her point across. In a distance education model this strategy would not be accessible.

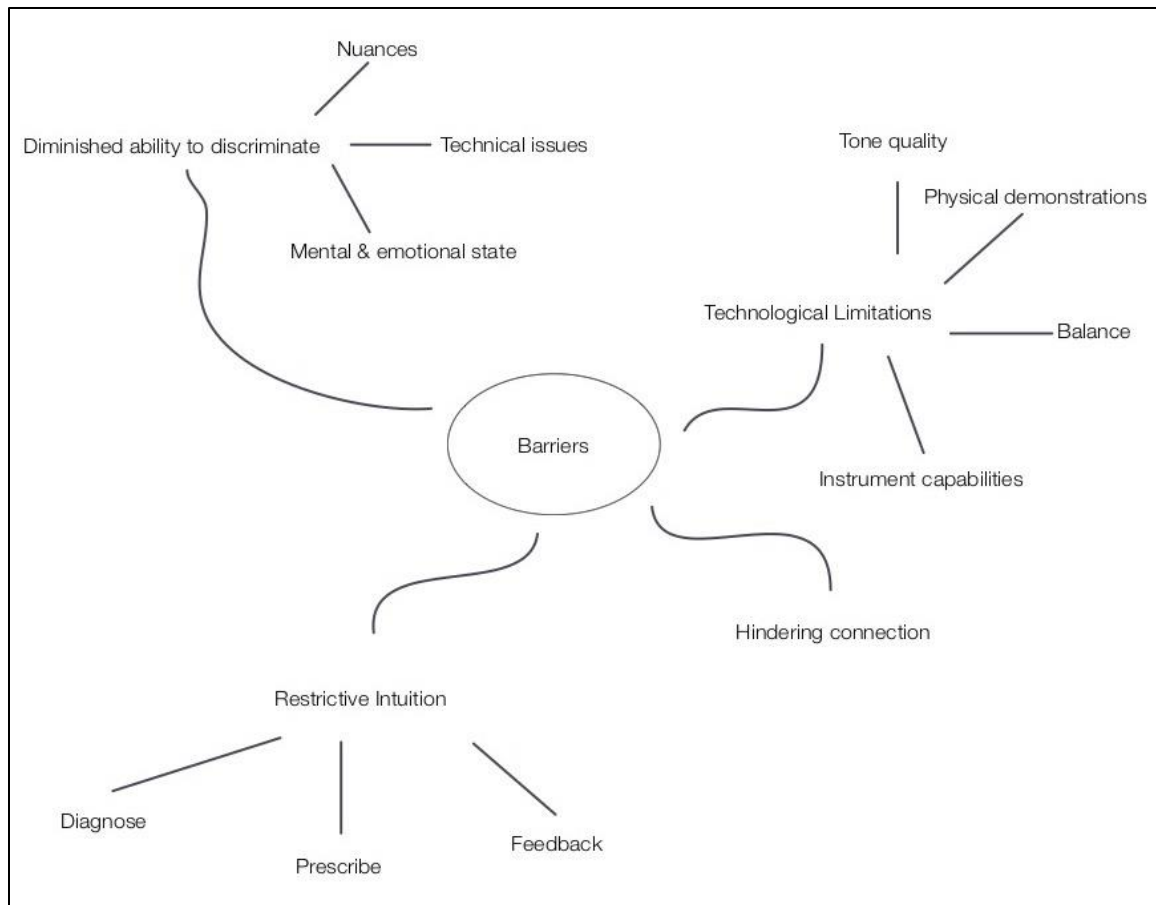


Figure 2. Barriers theme's categories and codes

Interviewees' excerpts.

P4: "We did 2 broadband masterclasses here for the students. I would say it was great for me as...to get Nelita True for shockingly low fee, because she invested 2 hours of her time. So I was able to pay her at the normal rate. So I had a great teacher but it was awkward. The broadband is awkward, it just... you do not have a real person in the room. The sound was not great and I am sure that can be fixed. And I think there is potential for that. I do not think is a good idea on a regular basis. I think personal face-to-face contact is necessary, you know certainly to develop a relationship." [Associated categories: Hindering connection, Technological limitations]

P1: "I have taught several lessons over the telephone which is not the same but similar (distance instruction)... I know technology is working very hard to get this improved (sound quality) but can't quite tell if the sound quality and sometimes the balance but otherwise you can give a pretty general assessment. And you can of course give them encouragement and confidence so that they can go to the festival and they played for their teacher." [Associated categories: Technological limitations, Diminished ability to discriminate]

"Doing something online, I think that as long as I can meet with the student occasionally It might be once a month. I think it is possible you can deal with lots of aspects, their playing, intellectual development, understanding of the music. But there's that human quality that is essential. Sometimes is not the sound quality. Is almost like using your intuition to understand the student. Sometimes we have to be in the same room to really understand why they are having so much difficulty with this passage." [Associated categories: Restrictive intuition]

"I think that online you can help them technically, you can help them in some way musically, but there is sometimes that personal connection that just all the sudden I think if you're a good teacher you have this sort of intuition where you can sense there is something holding them back. And that I think is easier when you are in the same room, but it is not impossible at a distance the just giving a lesson (face-to-face) once a month." [Hindering connection, Restrictive intuition]

Theme 3: Environmental constraints.

Environmental constraints include academic regulations as well as the culture surrounding applied piano instruction. Master-pianists find that sometimes current admission requirements may not provide a full picture of a learners' readiness to undertake graduate studies. Master-pianists also find that the final recital becomes in some cases a "test of nerves" rather than a useful assessment. Master-pianist may hold firm values, which are a combination of values pass on to them by their own professor and new ones developed as a result of their own experiences. Hence, master-pianists may find academic structure, examination systems, deadlines and time frames too restrictive.

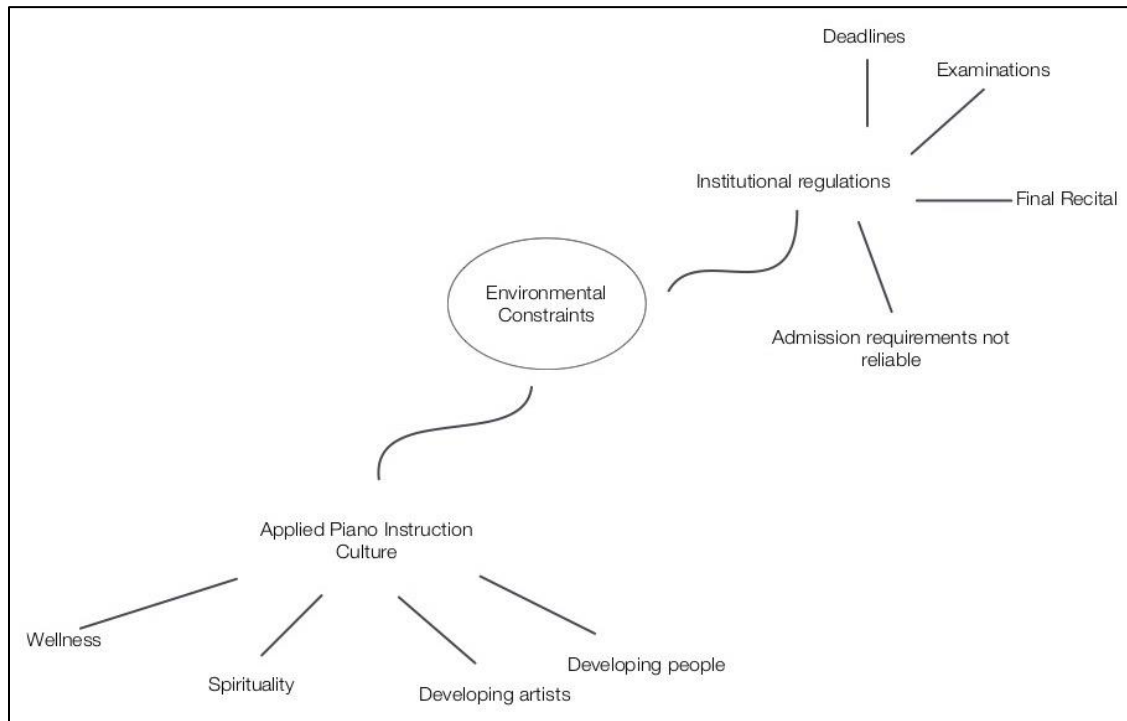


Figure 3. Environmental constraints theme's categories and codes

Interviewees' excerpts.

P4: "I find it really useful about learning piano is that essentially when you're playing the piano you are looking into a mirror. There is no problem with the piano, there is no problem with the music. The problem is in here (pointing to the head) and it is always that." [Associated categories: Applied piano instruction culture]

P7: "there could be additional ways to have a final assessment in addition to the final recital, such as evidence of professional performances, competitions, recordings, newspaper clippings, that can be a percentage of the final evaluation." [Associated categories: Institutional regulations]

P1: Hmm.. well I think...more...evaluating like every time they play in a sense, so that it is not just all or nothing at this big recital moment...Because sometimes I think competitions basically prove who is the most tough not whose the most sensitive." [Associated categories: Applied piano instruction culture, Institutional regulations]

In vivo codes

Tone: Term that is used to refer to the sound produced when playing the piano and that has specific features such as quality, warmth, roundness, and color.

Intuition: Term used by master-pianist to express they know something and not able to articulate how they come to know it.

Artist: Individuals that have attained expert level in piano performance

Balance: Layers of intensity or volume within a composition

Demonstration: Term used to refer either to the performance of a musical excerpt by the master-pianist, or to the execution of a physical movement that may or may not involve physical contact between the learner and master-pianist.

Playing: refers to the performance of an excerpt of music or a complete composition by the learner in a class, audition, or examination setting.

Understanding of the music: the ability to convincingly describe and explain every item in the score and its connections as well as providing a congruent performance.

Talent: an innate ability that allows a learner to go through the process of learning how to perform a composition with minimal guidance.

Chapter V. Conclusions and Recommendations

The purpose of this study was to discover a series of propositions that may be used to guide the development and/or conversion of graduate-level applied piano courses in online environments.

Central question

What components of advanced applied piano instruction in a traditional face-to-face environment do master-pianists consider must be included in online environments?

Sub-questions.

What are the goals of graduate level applied piano instruction?

What core psychomotor skills are required to undertake graduate studies?

What psychomotor skills will be developed during the graduate program?

What would it need to be in place for face-to-face master-pianist to teach online?

Are there any aspects or topics that could be taught in a group setting?

Are there any aspects of the practice of skills that would benefit from a peer-mentor model?

Qualitative research was the methodology used for this research — aimed at understanding processes, describing phenomena and developing new theory. Analysis in qualitative research is done through a non-computational process with the intention of making sense of the data collected, finding concepts and relationships, and then organizing them in tables, matrices, and narrative form. Investigators can choose from five traditions of inquiry: narrative, phenomenological, grounded theory, ethnography, and case study. After gaining an understanding of the specificities of each tradition of inquiry, grounded theory was chosen for this study.

Data collection was done with a one-on-one interview of ten questions. The questions were open-ended and consideration was given to include new questions based on the information the interviewee provided during the session. Coding, in its three phases, initial coding, focused coding, and axial, was the strategy of analysis. Through these phases of coding the researcher developed categories of information which were later interconnected and finally arranged in a set of theoretical propositions.

Thirteen categories were developed when analyzing the data. These categories were linked or connected in three themes. Each theme provided insight as to the function and processes that either take place in applied piano lessons or that influence or impact the lesson per se.

By examining the three themes found after analyzing the data one could conclude that the answer to the central question (what components of advanced applied piano instruction in a traditional face-to-face environment do master-pianists consider must be included in online environments) and sub-questions can be organized in two dimensions: the practitioners' dimension, and the academic dimension. These two dimension share a common thread: the master-pianist. The master-pianist role as an instructor and the influence of his/her values in the exercise of his/her practice should be considered when revising academic requirements.

Practitioners' Dimension

The practitioners' dimension provides insight into the process of instruction. Such process is highly unstructured. Although, there are specific activities such as performing compositions and executing dexterity and coordination exercises at the piano, the learning strategies used can differ greatly from one lesson to another. Online applied

lessons need to include opportunities for dialogue and making connections, playing demonstrations, and to try-out interpretative decisions. These lessons must be highly personalized to address the specific needs of each learner. This poses great technological demands, which include highly portable devices, with a fast internet connection, and very easy to use and set-up. Also, the training of master-pianists in this mode of delivery is paramount, as they may require developing alternate ways to convey their ideas to the learner. Specifically, with regard to the goals of graduate level applied piano instruction the results show there is a broad general goal that guides the master-pianist which can be stated as the development of artists. The lack of an explicit consensus on what specific skills should be demonstrated or the performance of specific repertoire can pose difficulties when assessing the learner.

No specific core psychomotor skills required to undertake graduate studies emerged in this study but to view this aspect as a continuum, a life-long learning process. This poses the question: where does the line need to be drawn as the minimum psychomotor development required for admission into an online performance degree?

The development of psychomotor skills during the degree is reflected on the effortless performance of compositions. Therefore, an assessment that considers a retrospective of compositions' levels of difficulty learnt and performed throughout the degree may be worth contemplating.

Results show the need of high quality video and audio transmission when contemplating teaching online. Also, results revealed that an important element during instruction is relationship-building and that such may be hinder when teaching online.

Results also revealed a lack of opportunities or interest in exploring new ways of structuring instruction as participants referred to traditional strategies, besides private instruction, such as group piano and master classes as the only possible options.

From the results one could argue that master-pianists would like more opportunities to engage in the development of higher-order thinking skills (analyzing, applying, and synthesizing).

The practitioners' dimension is comprised of Theme 1 and Theme 2. What follows is a detailed description of each theme.

Theme 1: The applied piano lesson is a hub to articulate and apply the learner's knowledge and experiences gained in other subjects through mentoring and coaching.

It seems that the structure of the applied piano course at the master level is flexible and dependent on the learner's needs. The master-pianist relies on the learner's previous knowledge as well the knowledge from other concurrent courses to assist, guide or teach the learner to perform effortlessly and expressively a given composition. Through dialogue, the master-pianist assists the learner to make connections between the fragmented knowledge and the composition he/she is learning to perform. Also, the master-pianist encourages creativity and insight by revealing his own point of views, strategies as well as personal and professional experiences. These, provides evidence that supports the theoretical framework of this research: the learning and development of the skills required to play the piano can be explained and described under a constructivist lens. Driscoll (2005, p. 384) asserts that the goals of constructivists include supporting learners so they can identify and pursue their own learning goals, as well to develop

critical thinking skills. Constructivists are also interested in assist learners to gain an understanding of the knowledge acquired and to apply it in the face of relevant problems to solve, and to develop personal inquiry skills. Such statements are congruent with the points of view expressed by the participants of this study during the interview. Participant 1 commented that “[in a master’s program] you want to get a level of playing that is more advanced than previously, and I think understanding it, performance is also about understanding it. So it is just not only being able to play fast and virtuosic pieces but having an understanding of styles and expanding your repertoire in areas that perhaps you have never looked into it, composers you never played before.” while participant 4 expressed that “the goal for advanced degree is to dig deeper than in the Bachelor’s...it depends how far you go.” Participant 6 on the other hand mentioned “I do not think that most people in the undergraduate degree have all the technique set. And that is one of the greatest mistakes in our education system is to assume that everybody’s technique is there and then they are pushed to the limit. They undertake repertoire that is too strenuous and that is when injuries happen. Technique is a life-long process.”

In a constructivist approach the emphasis is largely on the process of learning rather than on the products of learning (Driscoll 2005, p.393). Under constructivist conditions of learning, researchers recommend: (1) social negotiation as an integral part of learning, (2) support multiple perspectives and the use of multiple modes of representation, (3) encourage ownership in learning, and (4) to nurture self-awareness of the process of constructing knowledge. The above conditions of learning are illustrated in the various responses given by participants with regards to how lessons are conducted. Participant 3 mentioned that his teaching “totally depends on the student. It absolutely

depends on their background...we are not supposed to hold their hands, and tell them how to play every note...So it is always an interesting challenge to decipher what does music mean and that is something I think every student has to try to learn on their own. The professor has to give hints, has to lead sometimes, has to suggest, but it may involve working away from the piano. It may involve reading books, listening to and exploring large amounts of repertoire..." Participant 2 expressed that "less insightful and talented students need more input from me...the higher the level the more demonstration is required. Because words sometimes cannot express what we are trying to get across, only through demonstration and what we hear aurally or see visually by the mentor actually performing it will sink in."

Theme 2: Barriers.

Probably the main concerns voiced by the participants were how the relationship between learner and master-pianist could be impacted negatively when instructing at a distance and the inability to make use of demonstrations that require physical contact between the learner and the master-pianist. When contrasting the responses between participants of older age groups and younger age groups it seems that younger generations are more open to explore the distance delivery of applied piano instruction. This may point to differences in generational beliefs with regards to what is needed to develop trusting and meaningful relationships. In this study P2 asserted that "the higher the level you go more demonstration is required because sometimes words can't express what we are trying to get across only through demonstration and what hear aurally or see visually by the mentor actually performing it."

Implications for DE designers.

In the bibliographical study by Anderson and Kanuka (1999), in which they identified and categorized the positions of constructivism as well as the implications for instructional design, they assert that successful technology-mediated learning activities to develop higher order thinking skills will require educators to “acquire new perspectives in a number of diverse areas, including the philosophical orientation to teaching and learning” whether constructivism or instructivism. Anderson and Kanuka (1999) further assert that educators that choose to embrace constructivism within an online environment in higher-education “find making sense of the literature on constructivism an overwhelming adventure.”

Anderson and Kanuka argue that constructivist views can be categorized in four positions along two dimensions: objectivity/subjectivity in a reality continuum, and the social/individual construction in a knowledge continuum. These positions are shown in the figure below.

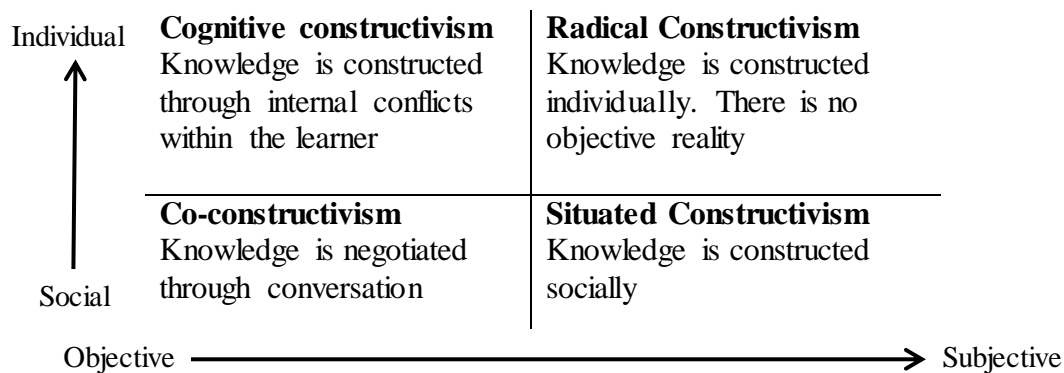


Figure 4. Adapted from Anderson and Kanuka’s Epistemological constructivist positions

Based on the results of this study, it seems that the cognitive-constructivist position is congruent with the processes involved in the applied piano course in the master’s program. Instructional methods that better support this position include case

problem solving, debates, individual and group summarizing, and team teaching using heterogeneous grouping (Anderson and Kanuka, 1999). Some of these instructional methods translate in the applied piano course as follows:

1. Problem solving is analogous to the study of a musical work for performance
2. Debate is analogous to the exchange of viewpoints between learner and master-pianist
3. Team-teaching is analogous to master-classes

It is important to notice that in a master-class a guest master-pianist provides suggestions and strategies to a group of learners to further refine the performance of a musical work without a previous meeting with each of the learners' assigned master-pianists. However this strategy does provide to the learner with interaction with peers who may have different ability levels and backgrounds that will stimulate the learner's accommodation of conflicting ideas that will generate new knowledge.

Anderson and Kanuk provide guidelines to assist instructional designers to implement constructivist instructional methods in online environments. It is now the responsibility of instructional designers to adopt a cognitive-constructivist position and to consider the specificities provided in this study with regards to the strategies used in the applied piano course for a successful conversion to online environments.

On the other hand, it has been mentioned that a close relationship is developed between the master-pianist and learner. Such a close relationship, where interactions between the learner and the master-pianist may trigger a myriad of emotional responses, may be possible because of the one-on-one environment in which whatever is discussed

“stays in the classroom.” Such environment may be altered by the need of technical assistants to be present during synchronous sessions.

Instructional designers may be faced with the challenge to find ways to preserve such one-on-one environment when designing synchronous instruction. They may be also required to explore the use of cutting edge sound and MIDI technologies that may bring down some of the barriers regarding sound transmission as well as the exploration and/or design of synchronous instruction tools which are extremely user friendly and that do not require technical assistance for set-up and use. Even though the focus of this research has been on the applied piano course of the graduate program, it is also important to mention that instructional designers will also have to work on course conversion of the other courses of the program.

Further research.

The conservatory model is the current model of instruction used in universities. Such model has suffered little or no change to accommodate emerging learners’ needs as well as the evolution of educational policy.

Studies about possible alternatives of curriculum development that consider the above issues are sorely needed. It would also be of great benefit to further the research and development on ways to use current constructivist instructional strategies in applied piano programs at the graduate level in face-to-face and online environments.

Over the past decade online learning has increasingly enabled individuals to learn from and with one another while playing the roles of both learner and teacher (Dron and Anderson 2014, p. xi). It is still unknown how social software is or can be used in applied piano instruction and in instrumental applied instruction for that matter. Research on

cross-generational views on relationship building mediated through technology, congruency of current piano teachers' training programs and current learning theories and technologies as well as the role of emotion in the learning process may provide valuable insights for the design and development of applied piano instruction in online environments in higher education.

Academic Dimension

This dimension encompasses the master-pianist professional values as well as organizational culture and regulations. Such, have a significant impact in the delivery of applied piano courses. Although the master-pianist ensures the learner has achieved the goals required to graduate, he/she may emphasize more some aspects than others. From the study in depth of a specific composer's repertoire, genre or style period to the development of instructional and scholarly skills. A balance must be stroked between the master-pianist professional values and the academic regulations for a successful degree completion.

Theme 3: Environmental constrains.

It seems that master-pianists' values play a significant role as to how sessions are delivered and what content is relevant and worth investigating further. P6 stated: "one of the most important things for me in terms with my work is to ensure that they [learners] have a balanced healthy approach to avoid injuries." P3 commented "you are in the business of developing people. The one thing about piano pedagogy [referring to applied piano instruction] is that does touch all aspects of the personality whatever model you use [to teach]." It is also clear that these values impact their views with regards to the appropriateness and effectiveness of the current assessment strategies used in piano

performance master's degrees. Such views seem to be in conflict with current assessment strategies, mainly the final recital exam. P3 commented "I have students that have accomplished things that probably demonstrate that ...I have always worked within the structure of the degree as we have it. And when something is unbearable of course I tried to change it." P4 commented "I think you need to do that [final recital]. My problem is that there is usually a time limit and there is pressure to do it."

Implications for DE.

The design of applied piano courses in online environments needs to consider the culture and values of the master-pianist. Providing opportunities for the master-pianists to provide learning strategies and assessments in alignment with his/her values is paramount. At the institutional level, it may be useful to explore the development of a course-based performance degree in addition to the current Final Recital (in lieu of the thesis) based degree. Alternate strategies for final examinations also need to be explored by designers.

Further research.

The transition from face-to-face to online instruction can be overwhelming. Seasoned and experienced face-to-face instructors become novice online instructors. Research on teacher training for online environments as well as on the professional identity and teaching practice will be useful for the implementation of a performance degree online. Research would also be beneficial in the area of assessment for the performing arts.

Final Comments

The results of this research show that there is much to do in order to engage in the design/conversion of applied piano courses: from exploring and piloting different models of instruction and assessment to the development of new technologies (software and hardware). This research has also shed light into the complexity of applied piano instruction as well as a connection with the constructivist view. There is no question that a multidisciplinary approach to applied piano instruction training, which includes educational psychology, kinesiology, and educational technologies, is required for a pianist to become an effective instructor in this day and age.

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Appendices

Appendix 1 Interview protocol sketch

The participant will receive one day before the interview, via email, a short document about distance education, online learning and definition of terms that may be used during the interview. Also a short biographical questionnaire will be provided to gather information about participant's experience and education. What follows is the content of the document mentioned above.

Part 1. Background information

Individuals interested in pursuing graduate studies in piano performance may have limited opportunities to move from their cities to study with a specific master-pianist. Family and financial concerns may be also important factors. Putting on hold an independent Studio, losing probably the main source of income, may be the biggest factor to consider.

A piano performance graduate degree delivered fully online would potentially bring down barriers to access to higher education. It could be an option for those professionals who wish to further their education and need to continue fulfilling their family and work responsibilities.

We know that in general terms and within the context of Western classical music, there are numerous music subjects and programs that are currently taught completely online or in a blended mode of delivery in the United States. Graduate degree programs in Music Education are offered in nine US universities fully online. Various music theory courses and music history courses are also offered fully online or in a blended modality in various US universities for undergraduate and graduate levels. There are also numerous web sites that offer applied instruction for amateur musicians, and music subjects as well, employing a variety of technologies (web conferencing via Skype, streaming video, podcasts, ICT).

Literature on online learning in music shows that the concerns addressed have been mainly about its technological limitations and its effectiveness. More research seems to be needed with regards to instructional methods.

It is the purpose of this study to identify guidelines that may help in the development of online applied piano instruction at the advanced level.

What follows is a list of definitions of the terms that will be used in this interview:

1. Applied piano instruction. Structured instruction one-on-one where individuals learn how to perform musical works at the piano within the classical western tradition.
2. Advanced level of playing. Ability to appropriately perform a work that requires mastery in psychomotor skills involving dexterity, control, independence and balance; comprehension of the score that includes simultaneously three voice parts, and an understanding, and ability to apply, of the underlying performing practices associated to the work in question.

3. Technique. Development of specific reproductive psychomotor skills
4. Interpretation. The ability to appropriately translate music notation into sound when performing a work of classical music.
5. Theoretical background. Knowledge on music related subjects such as rudiments, harmony, analysis, and history within the western classical music tradition.
6. Online learning. Planned learning that occurs at a different time and place from teaching that is mediated through the internet.
7. Educational technology. The facilitation of learning using appropriate hardware and software.
8. Knowledge. It is what an individual is aware of. What the individual knows about something.
9. Skill. What an individual can do, execute, with a degree of effectiveness or any other measure of its quality.
10. Skills can be classified based on the portion of the cognitive, motor, or emotional requirements to its execution

Part 2. Biographical questionnaire (To be provided to the participant at the beginning of the interview)

First and last initials of your name (Ex. Alicia Romero: AR) _____

Gender : F__ M__

Age: 25-30__ 31-35__ 36-40__ 41-45__ 46-50__ 51-55__ 56 and up__

Formal education in music:

Instrument/area (composition, music education, etc) _____

Level attained: Conservatory (ARCT Diploma) ____ Bachelor____ Master____
Doctorate_____

Name of highest degree attained:_____

Other formal education (Sociology, Science, Education, etc):_____

Work environment: Private studio ____ College____ Conservatory____ University____

Years of experience as master-pianist:_____

Main genre of instruction (classical, jazz, pop):_____

Other subjects you may have taught? Yes__ No__. If yes list
here:_____

Part 3. Interview questions

In your opinion, what are the goals of advanced applied piano instruction at the graduate level?

Based on your experience what would be the psychomotor, cognitive and affective skills that prospective graduate students must possess?

What are the aspects or topics in the applied lesson that could be delivered online?

What would it need to be in place for face-to-face master-pianist to teach online?

Are there any aspects or topics of applied piano instruction that could be taught in a group setting?

Have you incorporated any type of technology in your teaching (video/audio recording, computers, etc.)? What was or has been your experience?

How often do you demonstrate psychomotor skills through physical contact?

Would you say that most of the challenges students face at the graduate level when learning new repertoire had to do with the interpretation of the score or a lack of psychomotor development?

What alternative or supplementary activities could the student perform to demonstrate proficiency in the execution of a musical work?

Appendix 2. Recruiting script

Dear piano teacher,

My name is Alicia Romero and I am a student at Athabasca University in the Master of Education program.

The aim of the thesis research, I am currently working on to graduate, is to identify guidelines that may help in the development of advanced applied piano instruction in online environments.

We know that in general terms and within the context of Western classical music, there are numerous music subjects and programs that are currently taught completely online or in a blended mode of delivery in the United States. Graduate degree programs in Music Education are offered in nine US universities fully online. Various music theory courses and music history courses are also offered fully online or in a blended modality in various US universities for undergraduate and graduate levels. There are also numerous web sites that offer applied instruction for amateur musicians, and music subjects as well, employing a variety of technologies (web conferencing via Skype, streaming video, podcasts, ICT).

Literature on online learning in music shows that the concerns addressed have been mainly about its technological limitations and its effectiveness. More research seems to be needed with regards to instructional methods.

A piano performance graduate degree delivered fully online would potentially bring down barriers to access to higher education. It could be an option for those professionals who wish to further their education and need to continue fulfilling their family and work responsibilities.

Pianists that have taught Royal Conservatory of Music (RCM) grade 10 and up (college, undergraduate and graduate levels) possess a wealth of information and experience that would be very useful for the completion of the thesis research mentioned above.

Participation in this study involves a 1 hour interview.

If you would like to participate and/or would like more information please feel free to contact me at 403.208.1739 or email at aliciaromero@shaw.ca

Regards

Alicia Romero, B Mus.

AU Graduate Student

This study has been reviewed by the Athabasca University Research Ethics Board. Should you have any comments or concerns regarding your treatment as a participant in this study, please contact the Office of Research Ethics at 1.780.675.6718 or by email to rebsec@athabascau.ca

Appendix 3. Preliminary informed consent form

This informed consent form is for pianist-teachers in the province of Alberta that will be participating in the grounded theory study *Online piano applied instruction at the advanced level*.

Researcher: Alicia Romero, MDE graduate student

Institution: Centre for Distance Education, Athabasca University

Supervisors: To be appointed

This informed consent form has two parts:

- Information Sheet (to share information about the study with you)
- Certificate of Consent (for signatures if you agree to participate)

You will be given a copy of the full informed consent form

Information sheet (Part 1)

I am a graduate student at Athabasca University. The present study will be conducted as part of my studies in the Master of Education in Distance Education. You are being asked to participate in this research study. Please take your time to review this consent form and discuss any questions you may have, or words you do not clearly understand, with me. You may take your time to make your decision about participating in this study and you may discuss it with your friends or family before you make your decision.

Purpose

The purpose of this study is to discover strategies that may help in the development of online piano applied instruction at the advanced level.

Benefits of this study

This study may provide a series of prescriptions that course designers will use to develop appropriate and effective online piano applied instruction. It will also provide with insights about how advanced level students learn and if the profession may benefit from the use of current learning and instructional theories in the traditional face-to-face format.

Study procedures

A one hour one-on-one interview with master-pianist and two lesson observations (with the same student) are the means chosen to gather information for this study. Also, participants

will be asked to provide feedback on the accuracy of my interpretation of the information from the interviews and observations.

You are encouraged to ask questions or raise concerns at any time about the nature of the study or the procedures I am using. Please contact me at any time at the e-mail address or telephone number listed above.

Our interview and lesson observations will be audio and video taped respectively to help me accurately capture your insights in your own words. The tapes will only be heard or watch by me for the purpose of this study. If you feel uncomfortable with the recorder, you may ask that it be turned off at any time.

You also have the right to withdraw from the study at any time. In the event you choose to withdraw from the study all information you provide (including tapes) will be destroyed and omitted from the final paper. The insights gathered from the interviews will be used in writing a thesis, which will be read by the supervisors and jury. Though direct quotes from you may be used in the paper, your name and other identifying information will be kept anonymous.

Risk

This study poses little to no risk to its participants. I will do my best to ensure that confidentiality is maintained by not citing your actual name within the actual study.

Selection of participants

I would like to capture as much as possible the different points of views and teaching strategies used in traditional face-to-face piano applied instruction. Hence I would like to talk and observe pianist-teachers with varying years of experience teaching advanced students within the western classical music tradition from different environments (independent studio, conservatory, university, and college).

Cost

The study procedures are conducted at no cost to you.

Certificate of consent (Part 2)

I _____ consent to participate in the research study “Online piano applied instruction at the advanced level”

Procedures

I _____ (check one or more) consent to participate in: 1) _____ an individual interview; 2) _____ a two lesson observations; _____ both.

I _____ (check one only) _____ consent _____ do not consent to being contacted at a later time for any clarification required on the interview responses.

I authorize the inspection of any of my records that relate to this study by Athabasca University Research Ethics Board for quality assurance purposes.

By signing this consent form, I have not waived any of the legal rights that I have as a participant in a research study.

Participant Signature: _____ Date: _____

Participant Printed Name: _____

Participant Address (if consented to provide) _____

Appendix 4. Ethics Approval



MEMORANDUM

DATE: April 26, 2013
TO: Alicia Romero
COPY: Dr. Tom Jones (Research Supervisor)
Janice Green, Secretary, Athabasca University Research Ethics Board
Dr. Simon Nuttgens, Chair, Athabasca University Research Ethics Board
FROM: Dr. Rick Kenny, Chair, CDE Research Ethics Review Committee
SUBJECT: Ethics Proposal #CDE-13-05: "Grounded Theory Study on Applied Piano on Online Environments"

Thank you for providing the revised application received April 24th in response to the Conditional Approval decision conveyed to you on April 22, 2013. The Centre for Distance Education (CDE) Research Ethics Review Committee, acting under authority of the Athabasca University Research Ethics Board to provide an expedited process of review for minimal risk student researcher projects, has reviewed the above-noted proposal and supporting documentation.

On behalf of the CDE Research Ethics Review Committee, I am pleased to confirm that this project has been granted **FULL APPROVAL** on ethical grounds, and **you may proceed** with recruitment **as soon as a revised application has been received** for file purposes only (no further review required) **showing the minor requested changes** noted below which were missed during removal of the observation.

Please show all revisions by using **yellow-highlighting** for additions and **yellow-highlighting with strikethrough** for deletions.

APPENDIX E – Informed Consent: Information Sheet (Part 1), "Study procedures" section

- **First paragraph, first sentence:** remove the words "and one lesson observation" and substitute "is" for "are". The corrected sentence should read "A one hour one-on-one interview with [a] master-pianist is the means chosen to gather information for this study."
- **Third paragraph**
 - **First sentence:** remove the words "and lesson observations" and "and video recorded respectively". The corrected sentence should read "Our interview will be audio recorded to help me accurately capture your insights in your own words".
 - **Second sentence:** remove the words "or watch". The corrected sentence should read "The recording will only be heard by me for the purpose of this study."
 - **Third sentence:** delete entirely, the sentence beginning with "Video recording of the lesson will..."

The approval for the study is **valid for a period of one year from the date of this memo**. If required, an extension must be sought in writing prior to the expiry of the existing approval. **A Final Report is to be submitted when the research project is completed**. The reporting form can be found online at <http://www.athabascau.ca/research/ethics/>.

This approval of your application will be reported to the Athabasca University Research Ethics Board (REB) at their next monthly meeting. The REB retains the right to request further information, or to revoke approval at any time.

As implementation of the proposal progresses, if you need to make any **significant changes or modifications please consult with your supervisor to obtain their support for those changes, then forward** this information immediately to the CDE Research Ethics Review Committee via rebsec@athabascau.ca, for further review.

If you have any questions, please do not hesitate to contact the Research Ethics office: rebsec@athabascau.ca.

Centre for Distance Education
Research Ethics Review Committee
(A Sub-Committee of the Athabasca University Research Ethics Board)